**AIR BAG RESTRAINT SYSTEM**

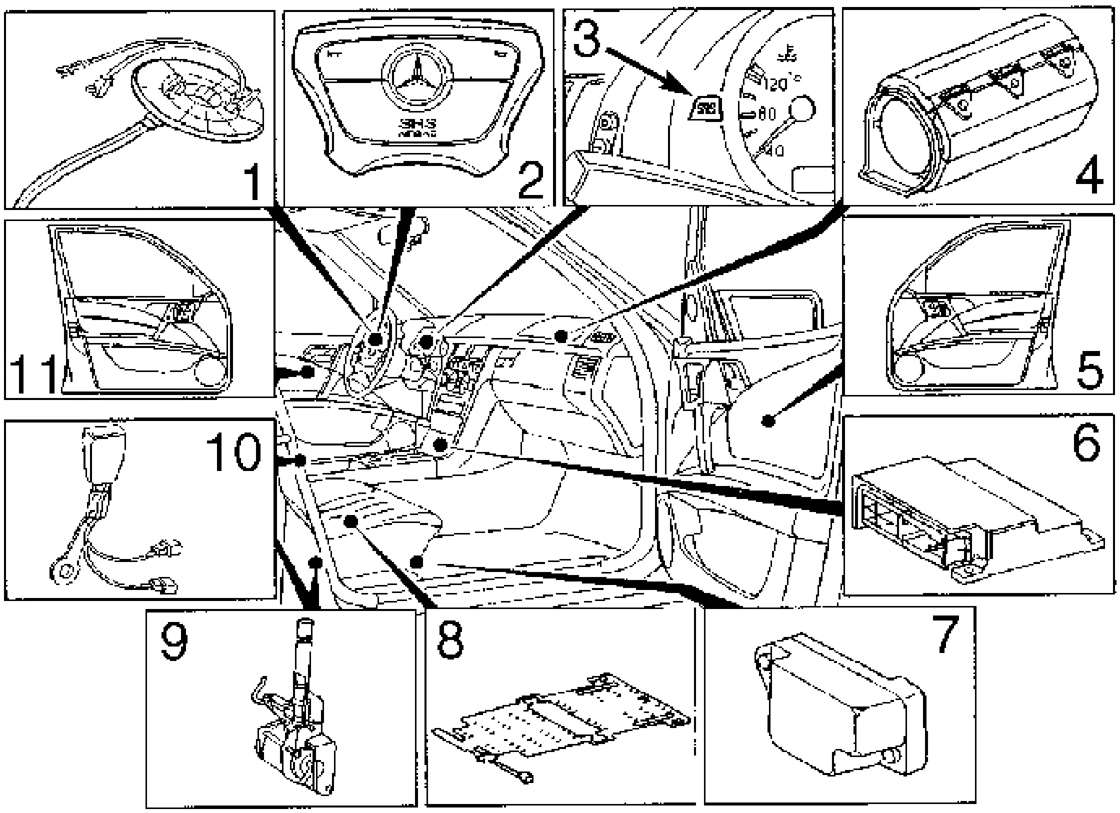
**1998 AIR BAG RESTRAINT SYSTEMS Mercedes-Benz**

## DESCRIPTION & OPERATION

**NOTE:** **Information on ML320 is not available. For WIRING DIAGRAMS, See Fig. 32 .**

**WARNING:** **To avoid injury from accidental air bag deployment, read and carefully follow all WARNINGS and SERVICE PRECAUTIONS .**

All models are equipped with Supplemental Restraint System (SRS). The main components of SRS are a driver air bag module, passenger air bag module, control unit, SRS warning light, driver knee bolster, passenger knee bolster, and Emergency Tensioning Retractor (ETR) seat belt assembly. Additionally, all vehicles provide driver-side and passenger-side impact protection by side air bags which are mounted in the driver-side and passenger-side doors. Each of the door mounted side air bags utilize sensors which recognize lateral acceleration during side impact and signal this to the control module. See **Fig. 1** .




1. Horn/Air Bag Clockspring Contact
2. Driver-Side Air Bag Squib
3. SRS Warning Light
4. Front Passenger Air Bag Squib
5. Right-Side Air Bag Squib
6. SRS Control Unit
7. Left & Right-Side Air Bag Sensor
8. Front Passenger Seat Occupied Recognition Sensor
9. Left & Right Front ETR Squib
10. Left & Right Seat Belt Buckle Switch
11. Left-Side Air Bag Squib

**Fig. 1: Locating Restraint System Components (E Class Shown; Others Are Similar)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

Both SRS and ETR are electronically activated by a single control unit if a moderately severe to severe frontal collision occurs. There are 2 thresholds which must be exceeded to trigger an ETR action, air bag deployment, or both. If a moderately severe frontal collision occurs exceeding first triggering threshold where protection from safety belt is sufficient, only Emergency Tensioning Retractor (ETR) is activated if safety belt is buckled. If a moderately severe frontal collision occurs exceeding first triggering threshold where protection from safety belt is sufficient, but safety belt is not buckled, air bag is deployed and EAR is not activated.

If a severe frontal collision occurs exceeding second triggering threshold where protection from safety belt is insufficient, air bag is deployed. EAR is activated if safety belt is buckled. If safety belt is not buckled, ETR is not activated when second triggering threshold is reached. Passenger air bag will deploy even if passenger seat is not occupied when a triggering threshold is exceeded. If during a severe frontal collision the power supply is interrupted, the driver and passenger air bag can still be deployed, but ETR cannot be activated.

The side air bag on the driver-side deploys whenever the driver-side air bag module is deployed and when there is a substantial side impact crash. The air bag on the passenger-side will activate only when a sensor (Occupied Seat Recognition Sensor) in the passenger seat sends a signal to the control module that the passenger-side seat is occupied. During a collision, the side air bag will then deploy.

## SERVICING

SRS AIR BAG label on driver-side door latch post indicates SRS replacement date for driver and passenger air bag units. All SRS components must be thoroughly inspected, including wiring harness. Before component replacement, check for SRS fault codes by performing system operation check. See **SYSTEM OPERATION CHECK** . SRS service life is 10 years from manufactured date, or 10 years from SRS replacement date after accident related repairs are completed.

## POST-COLLISION INSPECTION

When a vehicle has been involved in a collision, certain components of the passive restraint system must be inspected or replaced. See PASSIVE RESTRAINT SYSTEM INSPECTION article in the GENERAL INFORMATION section for post-collision inspection information.

## ADJUSTMENTS

If fixing screws were not used during clockspring removal or clockspring was rotated during removal, turn clockspring clockwise until resistance is detectable. Turn clockspring counterclockwise 2-2.5 turns until fixing screws can be unscrewed holding clockspring in this position.

## DISPOSAL PROCEDURES

WARNING: **An undeployed air bag module or ETR should never be disposed of without first being deployed. See SCRAPPED VEHICLE . If deployment is not possible, contact vehicle manufacturer for further instructions.**

Several situations may arise requiring some form of disposal action, including:

- Scrapping a vehicle containing a deployed air bag module and/or ETR.
- Scrapping a vehicle with a live air bag module and/or ETR.
- Disposal of a live but electrically faulty air bag module and/or ETR.
- Disposal of a deployed air bag module and/or ETR.

**DEPLOYED AIR BAG OR ETR**

Deployed air bag module and/or ETR unit can be thrown away. None of its components are reusable. Deployed air bag module is NOT classified as hazardous material.

**SCRAPPED VEHICLE**

WARNING: **An undeployed air bag module and/or ETR seat belt CANNOT be disposed of without first being deployed. If this is not possible through procedures outlined below, contact vehicle manufacturer for further instructions. Perform remote deployment outdoors. Keep personnel at least 20 feet away.**

1. Before proceeding, follow service precautions. See **SERVICE PRECAUTIONS** . Move vehicle outdoors to a remote area, away from workshop and other personnel. Disconnect and shield negative battery cable. Open all vehicle windows and doors.
2. Ensure air bag module is secured to steering wheel, and passenger air bag is secured to dash. Ensure ETR seat belt assemblies are secured to "B" pillars and all seat belt buckles are latched. Remove loose objects from front seat. DO NOT allow anyone inside vehicle.
3. Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Connect Trigger Device (126-589-00-90-00) and Adapter Cable (126 589 21 63 00) to SRS system connector (X29/9) located at passenger footwell area. See **Fig. 5** . Move away from vehicle as far as trigger device wiring will allow.
4. To deploy driver air bag and ETR, turn rotary knob on trigger device to position No. 1. Push battery check pushbutton and ignition pushbutton simultaneously. Trigger light should illuminate indicating driver air bag and ETR deployed. If trigger light is illuminated and driver air bag and/or ETR did not deploy, driver air bag module and/or ETR is faulty. See **UNDEPLOYED AIR BAG/ETR** .
5. To deploy passenger air bag detonator No. 1, turn rotary knob on trigger device to position No. 2. Push battery check pushbutton and ignition pushbutton simultaneously. Trigger light should illuminate indicating passenger air bag detonator No. 1 deployed. If trigger light is illuminated and passenger air bag detonator No. 1 did not deploy, passenger air bag module is faulty. See **UNDEPLOYED AIR BAG/ETR** .
6. To deploy passenger air bag detonator No. 2, turn rotary knob on trigger device to position No. 3. Push battery check pushbutton and ignition pushbutton simultaneously. Trigger light should illuminate indicating passenger air bag detonator No. 2 deployed. If trigger light is illuminated and passenger air bag detonator No. 2 did not deploy, passenger air bag module is faulty. See **UNDEPLOYED AIR BAG/ETR** .

#### UNDEPLOYED AIR BAG/ETR

After deploying procedures and/or diagnostic testing have confirmed air bag module and/or ETR is undeployable, contact vehicle manufacturer for proper disposal instructions.

## REMOVAL & INSTALLATION

WARNING: **Failure to follow service precautions may result in air bag deployment and personal injury. See SERVICE PRECAUTIONS . After component replacement, check system operation. See SYSTEM OPERATION CHECK .**

#### CLOCKSPRING ASSEMBLY

##### Removal & Installation

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
2. Remove driver air bag module. See **DRIVER-SIDE AIR BAG MODULE** . Remove steering wheel bolt. Using a puller, remove steering wheel. Disconnect lower clockspring connector. Turn 2 fixing screws (locating on clockspring) counterclockwise until clockspring cannot be rotated. Remove clockspring mounting screws as necessary. Disconnect all necessary electrical connectors. Remove clockspring assembly. To install, reverse removal procedure. Activate air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

#### CONTROL UNIT

##### Removal & Installation (C Class)

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove shift lever cover bezel. Lift shift lever cover enough to disconnect electrical connector. Remove shift lever cover.
2. Remove storage compartment mounting screws from center console. Remove storage compartment. Remove ashtray. Disconnect electrical connectors as necessary. Disconnect control module electrical connector. Remove control module mounting bolts. Remove control module.
3. To install, reverse removal procedure. Ensure control module arrow points to front of vehicle. Set parameters and program new control module with Hand-Held Tester (965 589 00 01 00). Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

##### Removal & Installation (E Class)

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove gear shift cover panel. Remove ashtray and ashtray housing at front of console. Remove radio (if necessary).
2. Remove center console right side cover screws and right side cover. Disconnect electrical connector for control unit. Remove 2 control unit mounting screws. Remove control unit.

3. To install, reverse removal procedure. Ensure control module arrow points to front of vehicle. Set parameters and program new control module with Hand-Held Tester (965 589 00 01 00). Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (S Class)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove radio. Remove ashtray. Remove wooden surround for ashtray. Remove shift lever cover mounting screws. Push shift lever cover toward rear of vehicle and remove in an upward direction.
2. Remove center console cover screws. Remove center console cover by pulling from bottom in an upward direction. When removing covers, disconnect electrical connectors as necessary. Disconnect control module electrical connector. Remove control module.
3. To install, reverse removal procedure. Ensure control module arrow points to front of vehicle. Set parameters and program new control module with Hand-Held Tester (965 589 00 01 00). Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (SL Class)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove radio. Push up and pull out heater control panel. Unplug 2 connectors. Remove screw in middle of storage tray.
2. Bend up at top corners and lift out storage tray. Remove screws below storage tray. Lift wood trim panel at rear, pull down and out of catches. Unplug switch connectors and remove wood trim panel. Unplug connectors at control unit and remove Torx mounting screws. Remove control unit.
3. To install, reverse removal procedure. Ensure control module arrow points to front of vehicle. Set parameters and program new control module with Hand-Held Tester (965 589 00 01 00). Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (CLK 320 & SLK 230)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove cover on center console. Remove cover on shift lever. Remove ash tray housing with storage compartment at front of center console. Unplug connectors at control unit and remove Torx mounting screws. Remove control unit.
2. To install, reverse removal procedure. Ensure control module arrow points to front of vehicle. Set parameters and program new control module with Hand-Held Tester (965 589 00 01 00). Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**DRIVER-SIDE AIR BAG MODULE**

**NOTE: Air bag module and steering wheel must be replaced following a collision in**

**which air bag was deployed.**

**Removal & Installation**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove 2 Torx screws from rear of steering wheel. Lift off air bag module enough to unplug connector from rear of module. Place module away from work area, with pad facing upward.
2. To install, reverse removal procedure. Tighten Torx screws to specification. See **TORQUE SPECIFICATIONS** . Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**SIDE AIR BAG UNIT - DRIVER-SIDE & PASSENGER-SIDE**

**Removal & Installation**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Drill out rivets at retaining plate of side air bag unit. Pull air bag unit out of door. Disconnect connector at driver-side air bag squib. Remove unit from vehicle. See **Fig. 2** .
2. To install, connect connector so that connector audibly clicks when connector engages. Install unit in door trim panel and rivet using only special rivets (Part No. 003 990 0097). Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

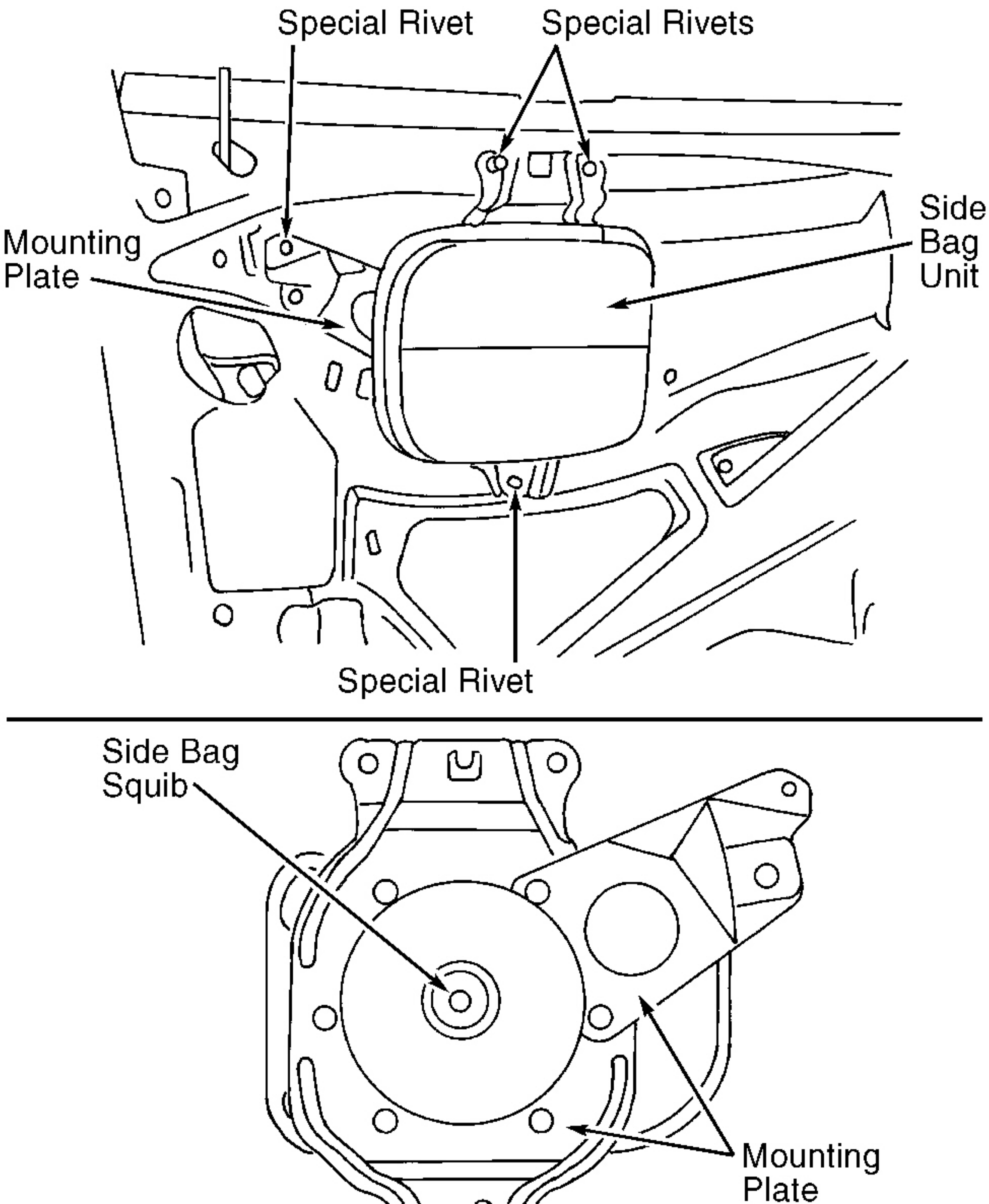
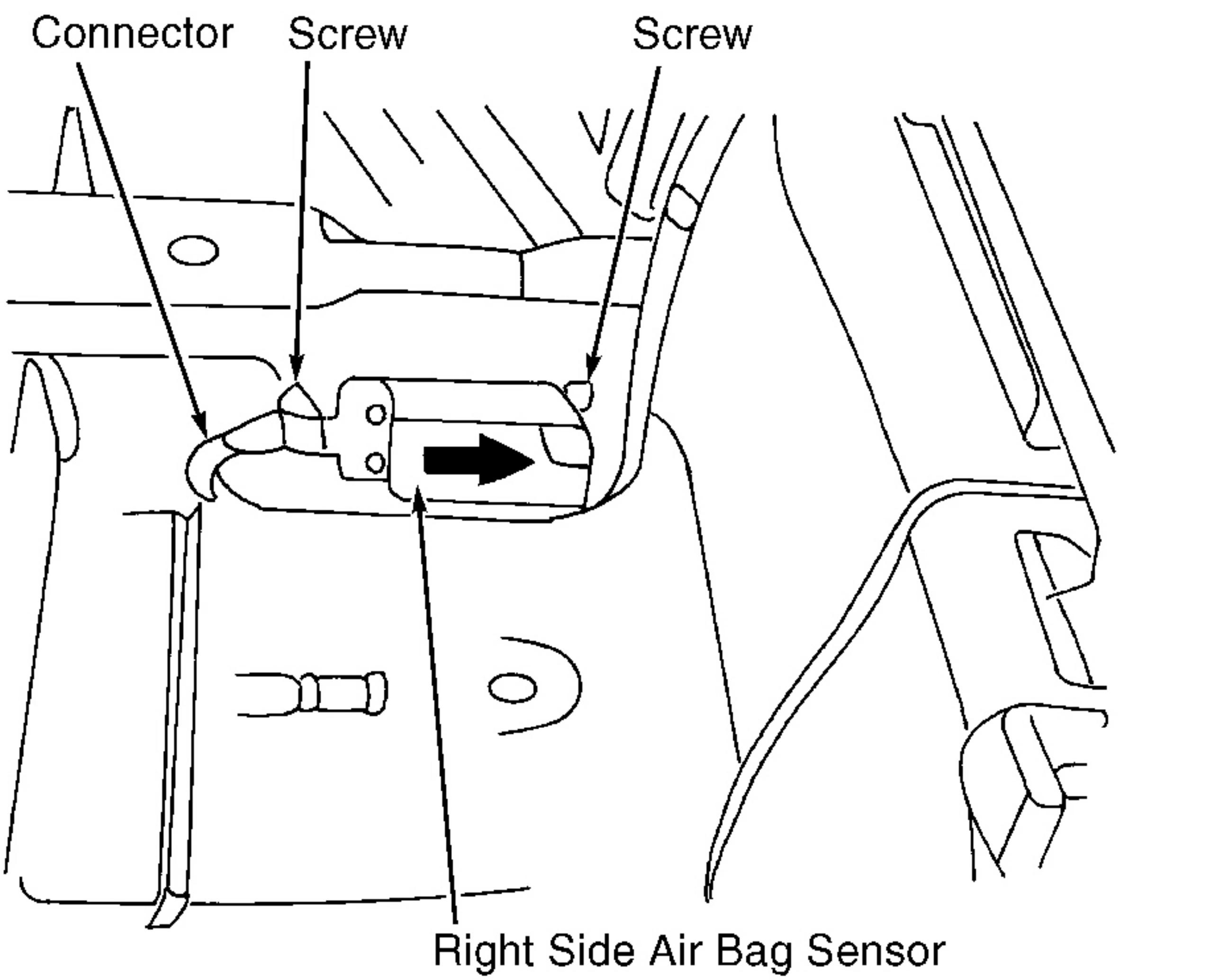

Special Rivet
Special Rivets
Side Bag Unit
Mounting Plate
Special Rivet
Side Bag Squib
Mounting Plate

**Fig. 2: Removing Side Air Bag Unit**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

### SIDE AIR BAG SENSOR - DRIVER-SIDE & PASSENGER-SIDE

#### Removal & Installation

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. On SLK 230, remove door sill moulding. On all models, remove front seat. Fold floor covering in area toward rear. Unclip connector on side bag sensor. Remove 2 mounting screws. Remove sensor from vehicle.
2. To install, reverse removal procedure. Ensure that arrow on sensor points toward outside. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .


Connector
Screw
Screw
Right Side Air Bag Sensor

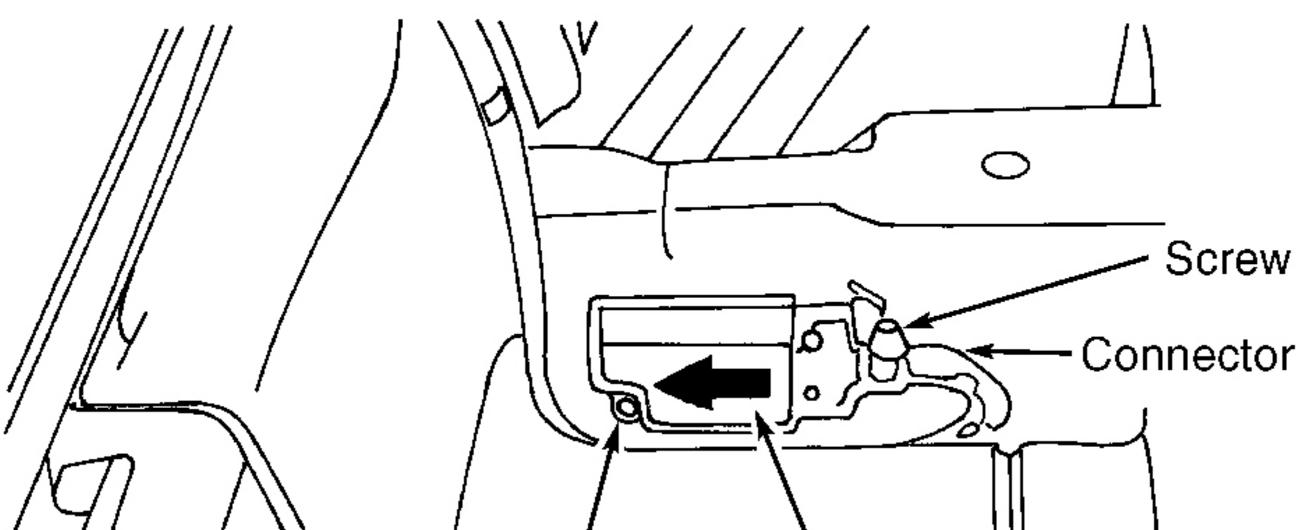

Screw
Connector

**Fig. 3: Removing Side Air Bag Sensor (E Class Shown; Others Are Similar)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

### OCCUPIED SEAT RECOGNITION SENSOR

#### Removal & Installation

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
2. Remove cover on front seat cushion. Remove ignition key. Unclip connection for occupied seat recognition sensor on seat connector block. Remove electrical connection lead from seat and pull upward out of rubberized fiber matting. See **Fig. 4** .
3. To install, lay out occupied seat recognition sensor uniformly on rubberized fiber matting. Fabric side should point upward. Do not kink occupied seat sensor. Reverse removal procedure. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

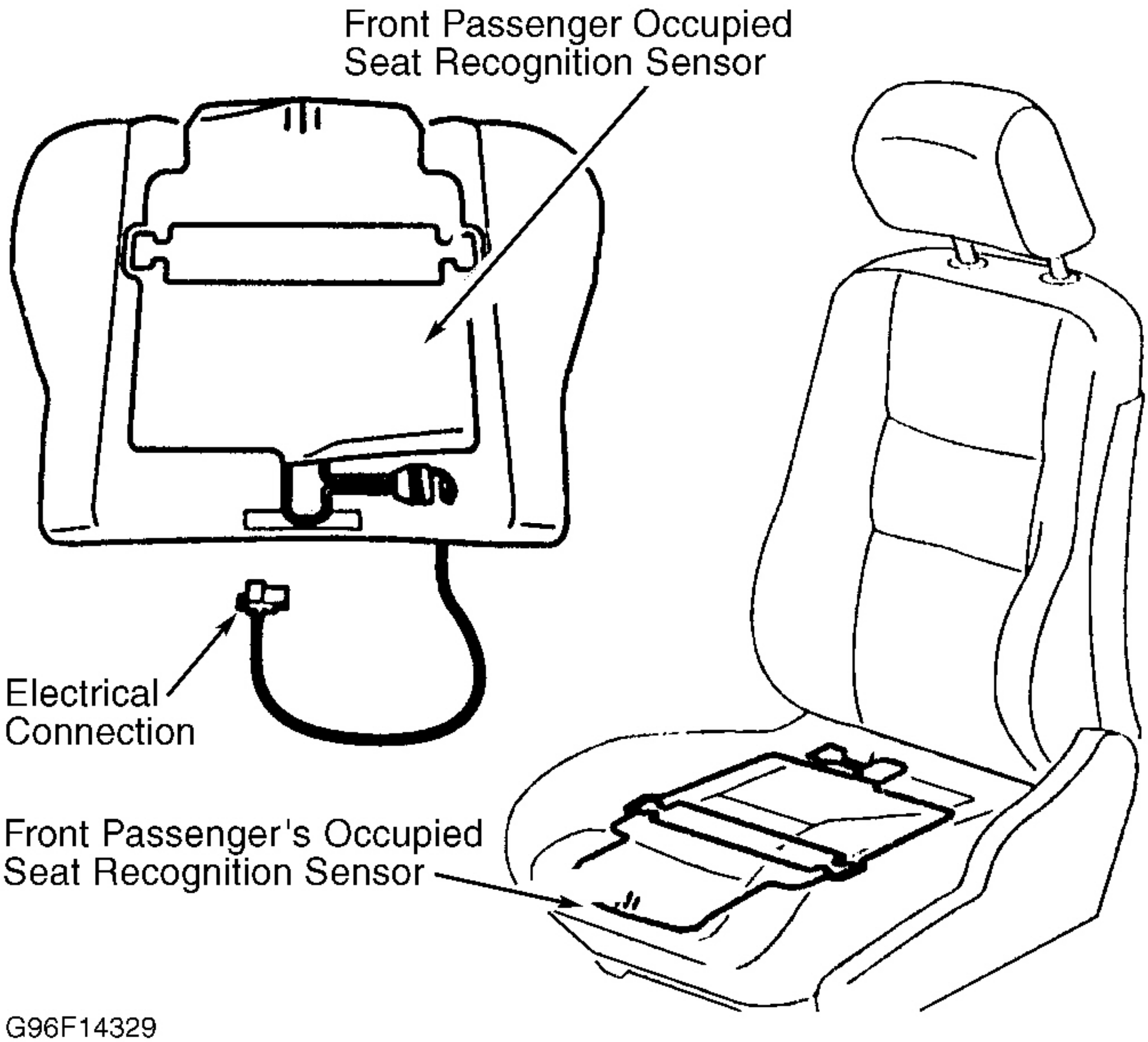



**Fig. 4: Removing Occupied Seat Recognition Sensor**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

### PASSENGER-SIDE AIR BAG MODULE

#### Removal & Installation (C Class)

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove instrument panel. Disconnect

passenger-side air bag module squib connector. Remove 4 passenger-side air bag module mounting nuts.

2. To install, reverse removal procedure. Ensure passenger-side air bag module squib connector audibly clicks when connecting connector. Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (E Class)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove 2 central mounting bolts for passenger-side air bag module. Lift air bag module enough to unplug connector from rear of module. Place module away from work area, with pad facing upward.
2. If necessary to replace passenger air bag installation frame, remove 4 frame mounting bolts. Remove installation frame from vehicle.
3. To install air bag module or installation frame, reverse removal procedure. Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (S Class)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Open glove box door. Remove 4 clips securing glove box. Remove glove box compartment. When removing compartment, disconnect glove box light. Remove glove box door lock striker.
2. Disconnect passenger-side air bag module squib connector. Remove 4 passenger-side air bag module mounting nuts. Remove passenger-side air bag module through glove box opening. Place module away from work area with pad facing up.
3. To install, reverse removal procedure. Ensure module squib connector audibly clicks when connecting connector. Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (SL Class)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove cover below instrument panel. Remove one bolt in installation slot of center air outlet, and one bolt below right air outlet.
2. Remove air bag panel (3 Phillips screws and 2 hex bolts). Unplug connector at squib of passenger-side air bag unit. Remove mounting bolts. Pull off and take air bag out of panel opening.
3. To install air bag module, reverse removal procedure. Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (CLK 320)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove instrument panel. Disconnect passenger-side air bag module connector. Remove 4 screws and passenger-side air bag module.
2. To install air bag module, reverse removal procedure. Activate air bag system. Perform system operation

check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

**Removal & Installation (SLK 230)**

1. Before proceeding, see **SERVICE PRECAUTIONS** . Disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** . Remove ignition key. Remove top section of instrument panel. Fold vapor barrier toward front to reveal 2 screws. Disconnect passenger-side air bag module connector. Remove 4 screws and passenger-side air bag module.
2. To install air bag module, reverse removal procedure. Activate air bag system. Perform system operation check to ensure system is functioning properly. See **SYSTEM OPERATION CHECK** .

## SYSTEM OPERATION CHECK

SRS warning light indicates air bag and Emergency Tensioning Retractor (ETR) system readiness. Turn ignition on. SRS warning light will light, and then go out after approximately 4 seconds indicating system is functioning properly. If SRS warning light does not light, lights up while driving or lights all the time, there is a system fault. Repair malfunctioning system. See **DIAGNOSIS & TESTING** .

## SERVICE PRECAUTIONS

Observe following precautions when working with air bag systems:

- When working around steering column components and before any repairs are performed, disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
- Before straightening any damage to body, or before performing electrical arc-welding, disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
- Always wear safety glasses and gloves when handling a deployed air bag module. Air bag module may contain sodium hydroxide deposits which are irritating to the skin.
- DO NOT repair any portion of SRS wiring harness.
- Always handle air bag module with trim cover away from your body. Always place air bag module on workbench with trim cover up, away from loose objects.
- DO NOT expose any SRS component to temperatures in excess of 212°F (100°C).
- DO NOT expose any SRS component to cleaning agents such as solvents, gasoline, lye, etc.
- DO NOT connect Hand-Held Tester (6511 0001 99) to Data Link Connector (DLC) with ignition on. Damage to HHT may result.
- DO NOT connect HHT (6511 0001 99) to vehicle if a battery charger is connected to vehicle battery. Damage to HHT may result.

## DISABLING & ACTIVATING AIR BAG SYSTEM DISABLING SYSTEM

Before proceeding, follow air bag service precautions. See **SERVICE PRECAUTIONS** . Turn ignition off. Disconnect and shield negative battery cable. Remove passenger foot mat. Remove passenger footrest. Disconnect SRS system connector (X29/9) located at passenger footwell area. See **Fig. 5** . System is now disabled.

### Activating System

Turn ignition off. Reconnect SRS system connector. Reconnect negative battery cable. System is now activated. Perform **SYSTEM OPERATION CHECK** .

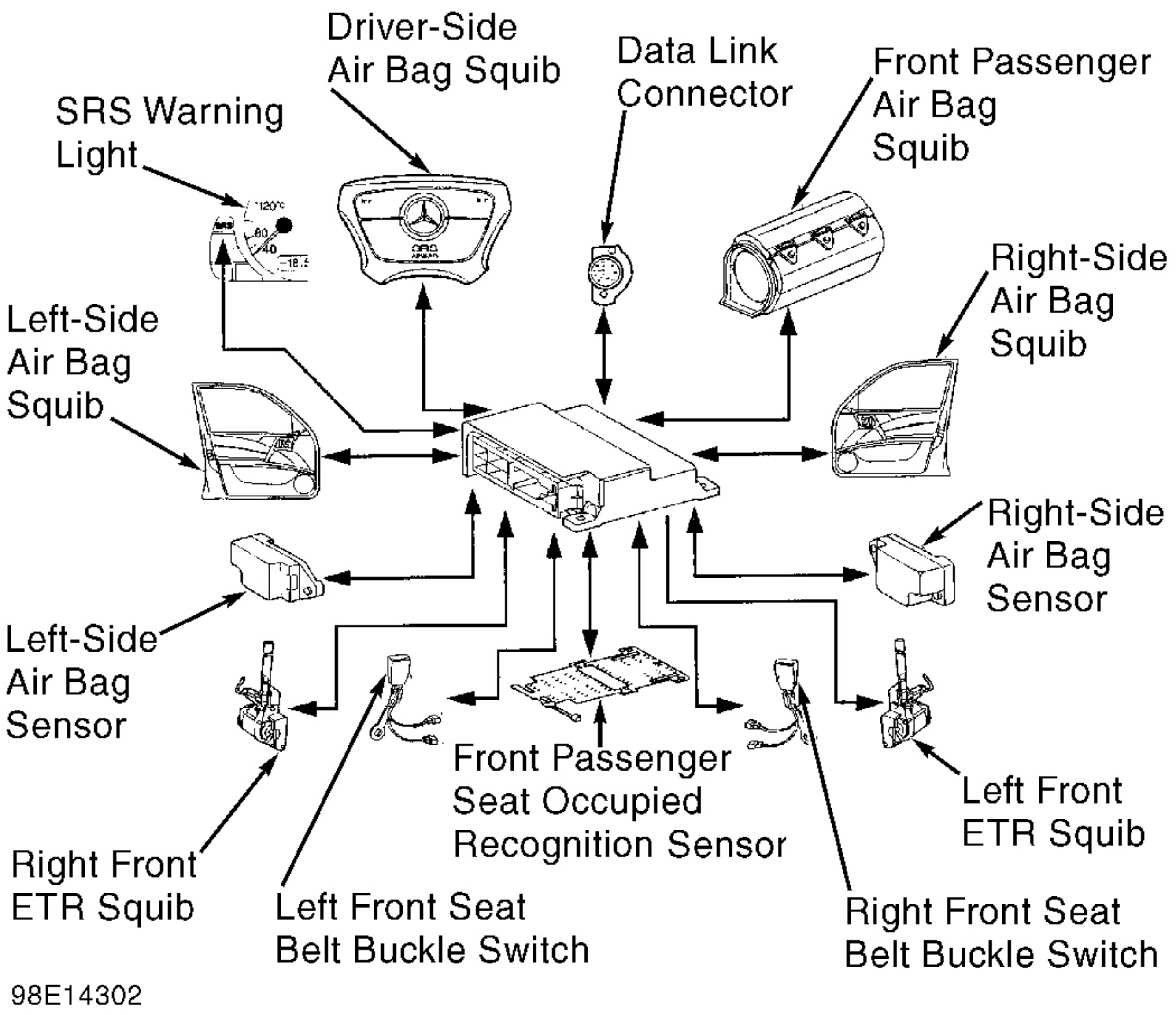



**Fig. 5: Locating SRS Connectors (Typical)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

## WIRE REPAIR

If any part of SRS wiring harness is damaged, DO NOT repair wiring harness, replace complete wiring harness.

## TORQUE SPECIFICATIONS

**TORQUE SPECIFICATIONS (1)**

| Application | Ft. Lbs. (N.m) |
| --- | --- |
| Steering Wheel Hub Bolt | 52-66 (70-90) |
| | INCH Lbs. (N.m) |
| Driver Air Bag Module Bolts (Torx) | 44-62 (5-7) |
| (1) Torque specifications are not available for clockspring assembly, control module or passenger-side air bag module. | |

## DIAGNOSIS & TESTING

**NOTE: After component replacement, perform a system operation check to ensure proper system operation. See SYSTEM OPERATION CHECK .**

Before proceeding, see **SERVICE PRECAUTIONS** . The control module is capable of diagnosing airbag system components and ETR components. If a fault is detected by the control module or system is malfunctioning, SRS warning light will do one or more of the following:

- SRS warning light goes out after 2 minutes. System fault is noted, however occupant protection is not affected. See **RETRIEVING FAULT CODES** .
- SRS warning light illuminates continuously. System is faulty which may result in a non deployment or false deployment. See **RETRIEVING FAULT CODES** .
- SRS warning light blinks continuously. Control module has been replaced without setting control module parameters.

### RETRIEVING FAULT CODES

**NOTE: Fault codes may only be retrieved using Hand-Held Tester (965 589 00 01) and Adapter (965 589 00 40 or 965 589 00 50).**

1. Check vehicle fuses. Replace any blown fuses as necessary. Ensure vehicle battery voltage is 11 volts or more. Ensure SRS warning light functions. Turn ignition off. Connect Hand-Held Tester (HHT) (965 589 00 01) to Data Link Connector (DLC).
2. DLC is located in right rear corner of engine compartment. It may be necessary to use Adapter (965 589 00 40 or 965 589 00 50) to connect HHT to DLC. After HHT displays module number and version, press return key to start diagnosis. Using HHT, follow HHT prompts to retrieve SRS fault codes.
3. HHT will display a 3 digit fault code, and may display additional graphic information. This additional graphic information will help in diagnosis of fault code. See **Fig. 6** . During diagnosis HHT will display 4 different graphic displays informing technician if a test passes or fails, or if seat belt buckle is latched or not latched. See **Fig. 6** .
4. These graphic displays are displayed as applicable by HHT during testing. See FAULT CODES table.

During diagnosis, system values are continuously updated, so by moving components and connections intermittent failures can be diagnosed. HHT will also display fault frequency and time span.

5. After retrieving fault codes using HHT, carefully observe testing instructions in this article. Some testing is executed with HHT connected to DLC and some tests are executed with HHT removed from DLC. Turn ignition off when removing or connecting HHT to DLC.
6. Contact Box (124 589 00 21) with Test Cable (124 589 35 63) is necessary to complete some test steps. Resistance Substitution Unit (124 589 09 63) is necessary to substitute resistance values for testing purposes.

[i]

A current fault is indicated by the DTC being highlighted in black.

Additional detailed information is given with most DTC's, which will indicate possible faults conditions:

| | |
|---|---|
| > Ω | Resistance too great. |
| < Ω | Resistance too low. |
| [ ]– | Short circuit to ground (GND) |
| [ ]+ | Short circuit to positive (POS). |
| | Open circuit. |

**Actual values:**

Four displays are possible:

√, F, On, OFF.

| | |
|---|---|
| √ : | Noted values are within the nominal values. |
| F : | Noted values are **outside** the nominal values. |
| On: | Seat belt buckle latched. |
| OFF: | Seat belt buckle **not** latched. |

96B14143

**Fig. 6: Hand Held Tester Graphic Information**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

**FAULT CODES**

| Code (Possible Cause) | Go To Test Step (See Fig.) |
|---|---|
| 00 | |
| (SRS Control Module, N2/2) | 2.0 |
| 003 | |
| (Voltage Supply Circuit 15R, Low Voltage) | 1.0 |
| 002 | |
| (SRS Warning Light, A1e15) | 11.0 |
| 004 | |
| (Driver Air Bag Squib, R12/3) | 3.0, 4.0 (7, 9) |
| 005 | |
| (Driver ETR Squib, R12/1) | 5.0 |
| 006 | |
| (Passenger ETR Squib, R12/2) | 7.0 |
| 007 | |
| (Passenger Air Bag Squib, R12/4) | 9.0, 10.0 (12, 13) |
| 008 | |
| (Side Air Bag Squib, Driver-Side) | 17.0 |
| 009 | |
| (Side Air Bag Squib, Passenger- Side) | 18.0 |
| 016 | |
| (Driver Belt Switch, S68/3) | 12.0, 13.0 |
| 017 | |
| (Passenger Belt Switch, S68/3) | 14.0, 15.0 |
| 018 | |
| (Driver Air Bag Harness) | 19.0 |
| 019 | |
| (Driver Air Bag Sensor) | Replace Sensor |
| 020 | |
| (Driver Air Bag Sensor) | Replace Sensor |
| 021 | |
| (Passenger Air Bag Sensor) | 20.0 |
| 022 | |
| (Passenger Air Bag Sensor) | Replace Sensor |
| 023 | |
| (Passenger Air Bag Sensor) | Replace Sensor |
| 024 | |
| (Passenger Seat Occupation Signal) | 21, 22 (21, 22) |
| 025 | |
| (Passenger Seat Occupation Signal) | 21 |

| | |
|---|---|
| 027 | |
| (Passenger Seat Occupation Signal) | 22 |
| 032, 033 | |
| (Communication Interference) | (1) |
| 034 | |
| (Digital Crash Output, Harness Fault) | (1) |
| 035 | |
| (Analog Crash Output, Harness Fault) | (1) |
| 036 | |
| (Auto Child Seat Recognition Light) | 22.0, 23.0 |
| (1) Test information is not available. | |

#### CLEARING FAULT CODES

Connect Hand-Held Tester (965 589 00 01) to Data Link Connector (DLC). DLC is located in right rear corner of engine compartment. It may be necessary to use Adapter (965 589 00 40 or 965 589 00 50) to connect HHT to DLC. After HHT displays module number and version, press return key to start sequence. Using HHT, follow HHT prompts to clear SRS fault codes. SRS codes are clear when ignition is turned on and SRS warning light functions normally. See **SYSTEM OPERATION CHECK** .

#### UNDERSTANDING DIAGNOSTIC CHART INFORMATION

**NOTE: To properly identify components or connectors being tested, see COMPONENT IDENTIFICATION table.**

### SRS & ETR Diagnosis Chart Column Identification

For example, see **Fig. 7** under DIAGNOSTIC TESTS. First column of chart identifies TEST STEP (1.0 for example). Second column of chart identifies HHT fault code (017, 003 for example). First code in column is for vehicles without side air bags. Second code in column (when listed) is for vehicles with side air bags only. Other 5 columns are self-explanatory.

### Using SRS & ETR Diagnosis Chart

- For reading and understanding fault code diagnosis chart, use the following example: Read test step 3.0 (first column), HHT fault Code 002, 004 (second column). See **Fig. 7** . Read TEST SCOPE/HHT ACTUAL VALUE NO./TEXT column (third column). Driver-side air bag squib connector R12/3 is being tested. HHT will identify if problem is with too much resistance or not enough resistance in driver-side air bag squib circuit. Read TEST CONDITION column (fifth column). Test circuit with HHT connected to DLC, with ignition in position "2". Read NOMINAL VALUE/HHT DISPLAY column (sixth column). HHT will display a check or an "F". If HHT displays a check, circuit is okay. If HHT displays an "F", go to step 3.1.
- Read TEST CONNECTION (NOT FOR HHT) column (forth column). Driver-Side air bag squib connector R12/3, terminals No. 1 and 2 are identified. Read TEST CONDITION column. Test circuit

with HHT connected to DLC and ignition key removed. Remove driver-side air bag module. Disconnect driver-side air bag module squib connector R12/3. Connect Resistance Substitution Unit (124 589 09 63) to driver-side air bag module squib connector (harness side). Set resistance substitution unit to 2 ohms. Turn ignition key to position "2". Read NOMINAL VALUE/HHT DISPLAY column. If HHT displays a check, replace driver-side air bag module. If HHT displays an "F", go to step 3.2.

- Read TEST CONNECTION (NOT FOR HHT) column. Horn/air bag clockspring connector A45x1, terminals No. 1 and 2 are identified. Read TEST CONDITION column. Test circuit with HHT connected to DLC. Remove ignition key. Connect Resistance Substitution Unit (124 589 09 63 00) to horn/air bag clockspring connector A45x1. Set resistance substitution unit to 2 ohms. Read NOMINAL VALUE/HHT DISPLAY column. If HHT displays a check, check horn/air bag clockspring for continuity. Replace horn/air bag clockspring as necessary. If HHT displays an "F", go to step 3.4.

**NOTE: Some testing is identified by model number. To identify models by model number see MODEL IDENTIFICATION table.**

**MODEL IDENTIFICATION**

| Model Number | Model |
|---|---|
| 129 | SL Class |
| 140 | S Class |
| 170 | SLK 230 |
| 202 | C Class |
| 208 | CLK 320 |
| 210 | E Class |

**COMPONENT IDENTIFICATION**

| Component | Manufacturer's Designation |
|---|---|
| A45 | Horn/Air Bag Clockspring |
| A53 | Driver-Side Air Bag Sensor |
| A54 | Passenger-Side Air Bag Sensor |
| B41/1 | Passenger-Side Seat Occupied Recognition Sensor |
| N2/2 | Control Module |
| R12/1 | Driver-Side ETR Squib Connector |
| R12/2 | Passenger-Side ETR Squib Connector |
| R12/3 | Driver-Side Air Bag Squib Connector |
| R12/8 | Passenger-Side Air Bag Squib Connector |
| R12/9 | Side Air Bag (Driver-Side)Squib Connector |
| R12/10 | Side Air Bag (Passenger-Side) Squib Connector |
| S68/3 | Driver-Side Belt Buckle Switch |
| S68/4 | Passenger-Side Belt Buckle Switch |
| W26 | Control Module Ground |
| X11/4 | Data Link Connector |

## DIAGNOSTIC TESTS

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection<br>(not for ) | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 1.0 | 017<br>003 | Circuit 15R voltage supply<br>Low voltage/<br>07 Voltage | | connected.<br>Ignition key in position "2". | √<br>F | <br>Wiring,<br>Battery (G1). |
| 2.0 | 001 | SRS control module (N2/2) | | connected.<br>Ignition key in position "2". | | **SRS Control Unit.** |
| 3.0 | 002<br>004 | 02 Driver AB<br>squib (R12/3) > Ω<br>< Ω | | connected.<br>Ignition key in position "2". | √<br>F | <br>⇒ 3.1 |
| 3.1 | | | R12/3<br>1 —( )— 2 | connected.<br>Remove ignition key.<br>Remove driver airbag.<br>Disconnect driver AB squib (R12/3).<br>Connect<br>**See Figure 27.**<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | Driver airbag unit.<br>⇒ 3.2 |

98F14303

**Fig. 7: SRS & ETR Diagnosis (1 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 3.2 | 002<br>004 | 02 Driver AB<br>squib (R12/3) > Ω<br>< Ω | A45x1<br>1 —( )— 2 | connected.<br>Remove ignition key.<br>Connect<br>See Figure 26.<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | Check horn/airbag clock spring contact (A45) for continuity.<br>⇒ 3.4<br>**Model 140:**<br>⇒ 3.3 |
| 3.3 | | **Model 140 only** | X11/3<br>3 —( Ω )— 4 | Remove ignition key.<br>Connect<br>See Figure 24. | 2 – 5 Ω | Wiring,<br>⇒ 3.4 |
| 3.4 | | Driver AB<br>squib (R12/3) > Ω<br>< Ω | N2/2<br>10 —( Ω )— 11 | Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | 2 – 5 Ω | Wiring. |

98G14304

**Fig. 8: SRS & ETR Diagnosis (2 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 4.0 | 002<br>004 | 02 Driver AB<br>squib (R12/3)<br>⊓−<br>⊓+ | N2/2<br>6 — 11<br>5 — 11 | **not** connected.<br>Remove ignition key.<br>Disconnect N2/2<br>connector.<br>Connect<br>See Figure 23. | >20 kΩ<br>>20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R. |
| 5.0 | 003<br>005 | 05 Left front ETR<br>squib (R12/1) > Ω<br>< Ω | | connected.<br>Ignition key in position "2". | √<br>F | ⇒ 5.1 |
| 5.1 | | | R12/1<br>1 — 2 | connected.<br>Remove ignition key.<br>Disconnect left front ETR<br>squib (R12/1) connector.<br>Connect<br>See Figure 27.<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | Seat belt retractor.<br>⇒ 5.2 |

98H14305.

**Fig. 9: SRS & ETR Diagnosis (3 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 5.2 | 003<br>005 | 05 Left front ETR<br>squib (R12/1)<br>> Ω<br>< Ω | N2/2<br>1 — 2 | Remove ignition key.<br>Disconnect N2/2<br>connector.<br>Connect<br>See Figure 23. | 2 – 5 Ω | Wiring.<br>**Model 129:**<br>ETR connector (left seat plug connection, X28/8) not properly connected. |
| 6.0 | 003<br>005 | 05 Left front ETR<br>squib (R12/1)<br>⊓−<br>⊓+ | N2/2<br>6 — 1<br>5 — 1 | **not** connected.<br>Remove ignition key.<br>Disconnect N2/2<br>connector.<br>Connect<br>See Figure 23. | >20 kΩ<br>>20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R. |
| 7.0 | 004<br>006 | 06 Right front ETR<br>squib (R12/2) > Ω<br>< Ω | | connected.<br>Ignition key in position "2". | √<br>F | ⇒ 7.1 |

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**Fig. 10: SRS & ETR Diagnosis (4 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
| --- | --- | --- | --- | --- | --- | --- |
| 7.1 | 004<br>006 | | R12/2<br>1 —( )— 2 | connected.<br>Remove ignition key.<br>Disconnect right front ETR squib (R12/2) connector.<br>Connect<br>See Figure 27.<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | Seat belt retractor.<br>⇒ 7.2 |
| 7.2 | | 06 Right front ETR squib (R12/2) > Ω<br>< Ω | N2/2<br>3 —( Ω )— 4 | Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | 2 – 5 Ω | Wiring.<br>**Model 129:**<br>ETR connector (right seat plug connection, X28/9) not properly connected. |
| 8.0 | 004<br>006 | 06 Right front ETR squib (R12/2)<br>Γ1–<br>Γ1+ | N2/2<br>6 —( Ω )— 4<br>5 —( Ω )— 4 | **not** connected.<br>Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | >20 kΩ<br>>20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R. |

98J14307

**Fig. 11: SRS & ETR Diagnosis (5 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 9.0 | 005 007 | 03 Front passenger AB squib (R12/8) > Ω < Ω | | connected. Ignition key in position "2". | √ F | ⇒ 9.1 |
| 9.1 | | | R12/8 1 — — 2 | connected. Remove ignition key. Remove glove box. Disconnect front passenger AB squib (R12/8) connector. Connect See Figure 27. Set resistance of 2 Ω. Ignition key in position "2". | √ F | Front passenger airbag unit. **Model 140:** SRS test connector (X11/13) not properly connected. **Model 202:** Airbag intermediate connector (X28/12) not properly connected. Model 140 ⇒ 9.2, Model 202 ⇒ 9.3, All models ⇒ 9.4 |
| 9.2 | | **Model 140 only** 06 Right front ETR squib (R12/2) > Ω < Ω | X11/13 5 — Ω — 6 | Remove ignition key. Disconnect X11/13. Connect See Figure 24. | 2 – 5 Ω | Wiring, ⇒ 9.4 |

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**Fig. 12: SRS & ETR Diagnosis (6 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 9.3 | | **Model 202 only** | X28/12 1 — — 2 | Remove ignition key. Disconnect X28/12. Connect See Figure 26. Set resistance of 2 Ω. Ignition key in position "2". | √ F | Wiring, ⇒ 9.4 |
| 9.4 | 005 007 | 03 Front passenger AB squib (R12/8) > Ω < Ω | N2/2 13 — Ω — 14 | Remove ignition key. Disconnect N2/2 connector. Connect See Figure 23. | 2 – 5 Ω | Wiring. |
| 10.0 | 005 007 | 03 Front passenger AB squib (R12/8) Γ1– Γ1+ | N2/2 6 — Ω — 14 5 — Ω — 14 | **not** connected. Remove ignition key. Disconnect N2/2 connector. Connect See Figure 23. | >20 kΩ >20 kΩ | Wiring, Short to circuit 31, 30, 15, 15R. |

98B14309

**Fig. 13: SRS & ETR Diagnosis (7 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 11.0 | 019[1)]<br>002 | 01 SRS MIL (A1e15)<br>–//–<br>Γ1+ | | connected.<br>Ignition key in position "2".<br>A1e15 comes on. | A1e15 goes out after approx. 4 sec.<br>√<br>F | Wiring,<br>A1e15 shorted to +. |
| 12.0 | 024<br>016 | 09 Left front seat belt buckle switch (S68/3)<br>–//– | | connected.<br>Ignition key in position "2".<br>Seat belt buckle **not** latched.<br>Seat belt buckle latched. | √<br>F<br>OFF<br>ON | Wiring,<br>Open/short circuit to circuit 31,<br>Left ESA connector block (X55/3) not properly connected. |
| 13.0 | | Γ1–<br>Γ1+ | N2/2<br>6 – Ω – 12<br>5 – Ω – 12 | Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23.<br>**not** connected.<br>Seat belt buckle **not** latched.<br>Seat belt buckle latched. | 280 – 580 Ω<br>70 – 279 Ω<br>> 20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R,<br>Seat belt buckle. |

98E14310

**Fig. 14: SRS & ETR Diagnosis (8 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | Tester | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 14.0 | 025 017 | 08 Right front seat belt buckle switch (S68/4) –//– | | Tester connected. Ignition key in position "2". | √ F | Wiring, Open/short circuit to circuit 31, Right ESA connector block (X55/4) not properly connected. |
| | | | | Seat belt buckle **not** latched. | OFF | |
| | | | | Seat belt buckle latched. | ON | |
| 15.0 | | | N2/2 | Remove ignition key. Disconnect N2/2 connector. Connect adapter. See Figure 23. Tester **not** connected. | | Wiring, Short to circuit 31, 30, 15, 15R, Seat belt buckle. |
| | | Γ1– | 6 —Ω— 8 | Seat belt buckle **not** latched. | 280 – 5800 Ω | |
| | | | | Seat belt buckle latched. | 70 – 279 Ω | |
| | | Γ1+ | 5 —Ω— 8 | | > 20 kΩ | |

98F14311

**Fig. 15: SRS & ETR Diagnosis (9 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | Tester | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 16.0 | 073[1] | Squibs < Ω > Ω | N2/2 | Remove ignition key. Disconnect N2/2 connector. Connect adapter. See Figure 23. | | Wiring, Short circuit. |
| | | R12/1 | 1 —Ω— 2 | | 2 – 5 Ω | |
| | | R12/2 | 3 —Ω— 4 | | 2 – 5 Ω | |
| | | R12/3 | 10 —Ω— 11 | | 3 – 5 Ω | |
| | | R12/8 | 13 —Ω— 14 | | 2 – 5 Ω | |
| | | Squibs in series Γ1 | | | | |
| | | R12/1–R12/2 | 1 —Ω— 3 | | > 20 kΩ | |
| | | R12/1–R12/3 | 1 —Ω— 10 | Tester **not** connected. | > 20 kΩ | |
| | | R12/1–R12/8 | 1 —Ω— 13 | | > 20 kΩ | |
| | | R12/2–R12/3 | 3 —Ω— 10 | | > 20 kΩ | |
| | | R12/2–R12/8 | 3 —Ω— 13 | | > 20 kΩ | |
| | | R12/3–R12/8 | 10 —Ω— 13 | | > 20 kΩ | |
| 17.0 | 008 | 010 Left side airbag squib (R12/9) > Ω < Ω | | Tester connected. Ignition key in position "2". | √ F | ⇒ 17.1 |

98G14312.

**Fig. 16: SRS & ETR Diagnosis (10 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 17.1 | | | X35/1 1 —( )— 2 | connected. Remove ignition key. Disconnect left front door separation point. Connect See Figure 26. Set resistance of 2 Ω. Ignition key in position "2". | √ F | ⇒ 17.2 |
| 17.2 | | | R12/9 1 —( )— 2 | connected. Remove ignition key. Remove interior door panel. Connect See Figure 27. Set resistance of 2 Ω. Ignition key in position "2". | √ F | Left side airbag, ⇒ 17.3 |
| 17.3 | 008 | 010 Left side airbag squib (R12/9) > Ω < Ω | N2/2 16 —( Ω )— 17 | Remove ignition key. Disconnect N2/2 connector. Connect See Figure 23. | 2 – 5 Ω | Wiring, Contacts. |

98H14313

**Fig. 17: SRS & ETR Diagnosis (11 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 17.4 | | 010 Left side airbag squib (R12/9)<br>⌐¬–<br>⌐¬+ | N2/2<br>6 — 16<br>5 — 16 | connected.<br>Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | >20 kΩ<br>>20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R. |
| 18.0 | 009 | 010 Right side airbag squib (R12/10)<br>> Ω<br>< Ω | | connected.<br>Ignition key in position "2". | √<br>F | ⇒ 18.1 |
| 18.1 | | | X35/1<br>1 — 2 | connected.<br>Remove ignition key.<br>Disconnect left front door separation point.<br>Connect<br>See Figure 26.<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | ⇒ 18.2 |

98I14314

**Fig. 18: SRS & ETR Diagnosis (12 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 18.2 | | | R12/9<br>1 — 2 | connected.<br>Remove ignition key.<br>Remove interior door panel.<br>Connect<br>See Figure 27.<br>Set resistance of 2 Ω.<br>Ignition key in position "2". | √<br>F | Left side airbag,<br>⇒ 18.3 |
| 18.3 | 009 | 010 Right side airbag squib (R12/10)<br>> Ω<br>< Ω | N2/2<br>18 — 19 | Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | 2 – 5 Ω | Wiring,<br>Contacts. |
| 18.4 | | 010 Right side airbag squib (R12/10)<br>⌐¬–<br>⌐¬+ | N2/2<br>6 — 18<br>5 — 18 | connected.<br>Remove ignition key.<br>Disconnect N2/2 connector.<br>Connect<br>See Figure 23. | >20 kΩ<br>>20 kΩ | Wiring,<br>Short to circuit 31, 30, 15, 15R. |

98J14315

**Fig. 19: SRS & ETR Diagnosis (13 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/ Actual value no. and text | Test connection | Test condition | Nominal value/ display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 19.0 | 018 | 012 Left side airbag sensor (A53) Voltage supply | A53: 1 — V — 3 | Disconnect A53 connector. Connect test cable, see See Figure 28. | 11 – 14 V | Wiring. |
| 19.1 | 018 | 012 Left side airbag sensor (A53) Wiring fault | N2/2 20 — Ω — 3 A53 | Connect See Figure 23. | < 1 Ω | Wiring. |
| 19.2 | 018 | 012 Left side airbag sensor (A53) Insulation fault<br>Γ1–<br>Γ1+ | N2/2<br>6 — Ω — 20<br>5 — Ω — 20 | Connect See Figure 23. Disconnect A53 connector. | <br>>20 kΩ<br>>20 kΩ | Wiring,<br>Short in wiring circuit 31,<br>Short in wiring circuit 30, 15, 15R |
| 20.0 | 021 | 013 Right side airbag sensor (A54) Voltage supply | A54: 1 — V — 3 | Disconnect A54 connector. Connect test cable, see See Figure 28. | 11 – 14 V | Wiring. |
| 20.1 | 021 | 012 Right side airbag sensor (A54) Wiring fault | N2/2 20 — Ω — 3 A54 | Connect See Figure 23. | < 1 Ω | Wiring. |

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**Fig. 20: SRS & ETR Diagnosis (14 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 20.2 | 021 | 012 Right side airbag sensor (A54)<br>Insulation fault f1–<br>f1+ | N2/2<br>6 — Ω — 20<br>5 — 20 | Connect<br>See Figure 23.<br>Disconnect connector at A54 | >20 kΩ<br>>20 kΩ | Short in wiring circuit 31,<br>Short in wiring circuit 30, 15, 15R |
| 21.0 | 020<br>024<br>025 | 04 Front passenger seat occupied recognition sensor (B41/1) or (B48) | | connected.<br>Ignition key in position "1". | √<br>F | ⇒ 21.1 |
| 21.1 | | | Except model 170 X55/3 X55/4<br>3 — 4<br>Model 170<br>3 — 2 | connected.<br>Connect<br>See Figure 29.<br>Set resistance of 30 k Ω (seat occupied), use diode 1N4007 as well as 300 Ω resistor, switched in parallel. Watch polarity! | √<br>F | Contact matt,<br>⇒ 21.2 |

98B14317

**Fig. 21: SRS & ETR Diagnosis (15 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

| ⇒ | | Test scope/<br>Actual value no. and text | Test connection | Test condition | Nominal value/<br>display | Possible cause/Remedy |
|---|---|---|---|---|---|---|
| 21.2 | | | Except model 170 X55/3 X55/4<br>3 — Ω — 4<br>Model 170<br>3 — Ω — 2 | Front passenger seat **not** occupied.<br>Front passenger seat **occupied**. | >70 k Ω<br>≤ 30 k Ω | Contact matt |
| 22.0 | 027<br>028<br>037 | Model 170 only<br>Front passenger seat occupied recognition with automatic child seat recognition (B48) (ACSR) | X55/3<br>X55/4<br>1 — V — 4 | Ignition key in position "1". | 11 – 14 V | Wiring,<br>Fuse 2 in fuse and relay box (F1). |
| 23.0 | 036 | Model 170 only<br>Automatic child seat recognition warning lamp (N72e1) (AIRBAG OFF),<br>Automatic child seat recognition (ACSR) indicator lamp (E16)<br>Voltage supply | E16<br>4 — V — 1 | Child seat **"Babysafe"** installed.<br>Ignition key in position "1". | 11 – 14 V | Wiring,<br>Fuse 3 in fuse and relay box (F1),<br>If ok:<br>E16 |

98C14318

**Fig. 22: SRS & ETR Diagnosis (16 Of 16)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

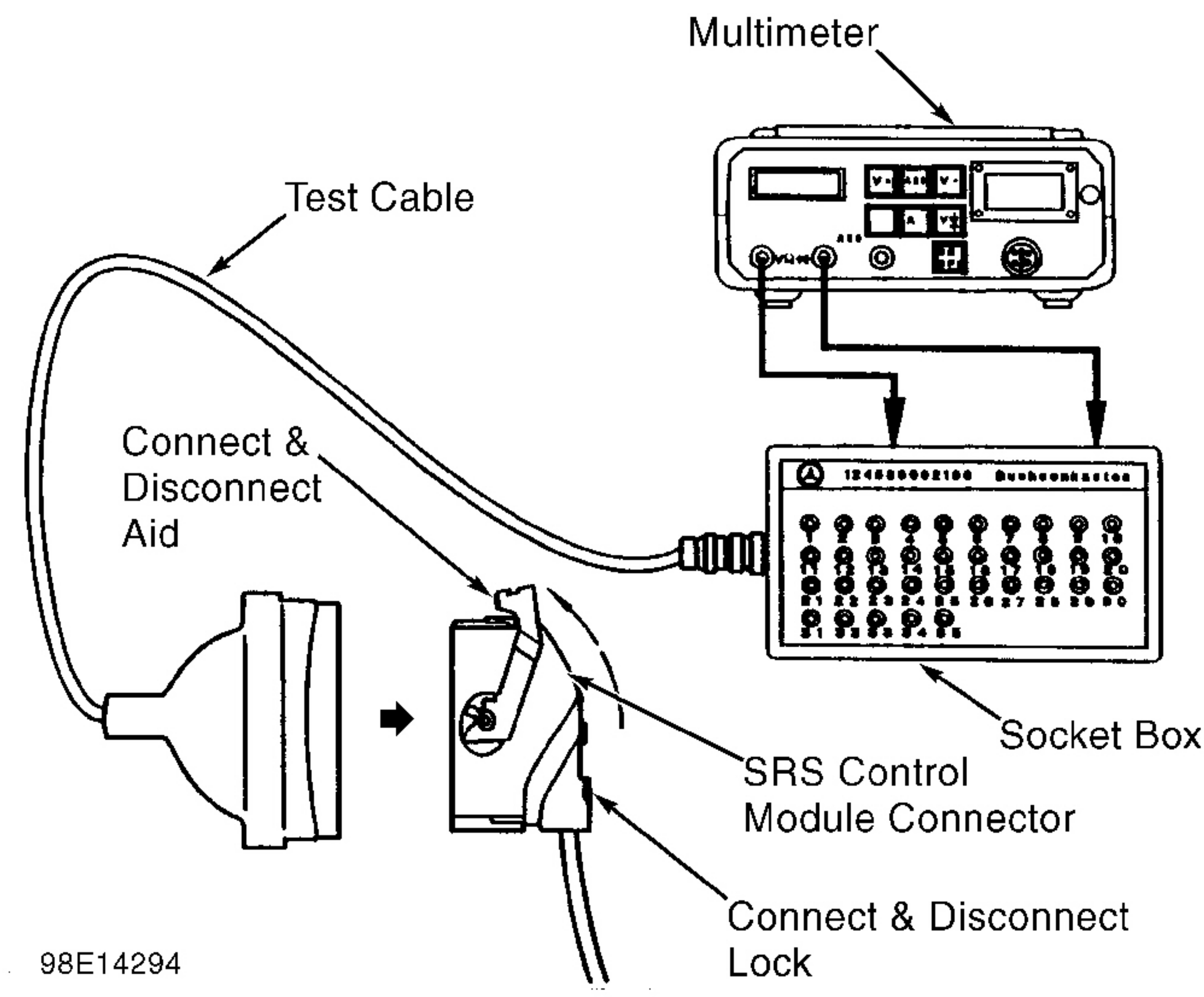



**Fig. 23: Connecting Socket Box (1 Of 2)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

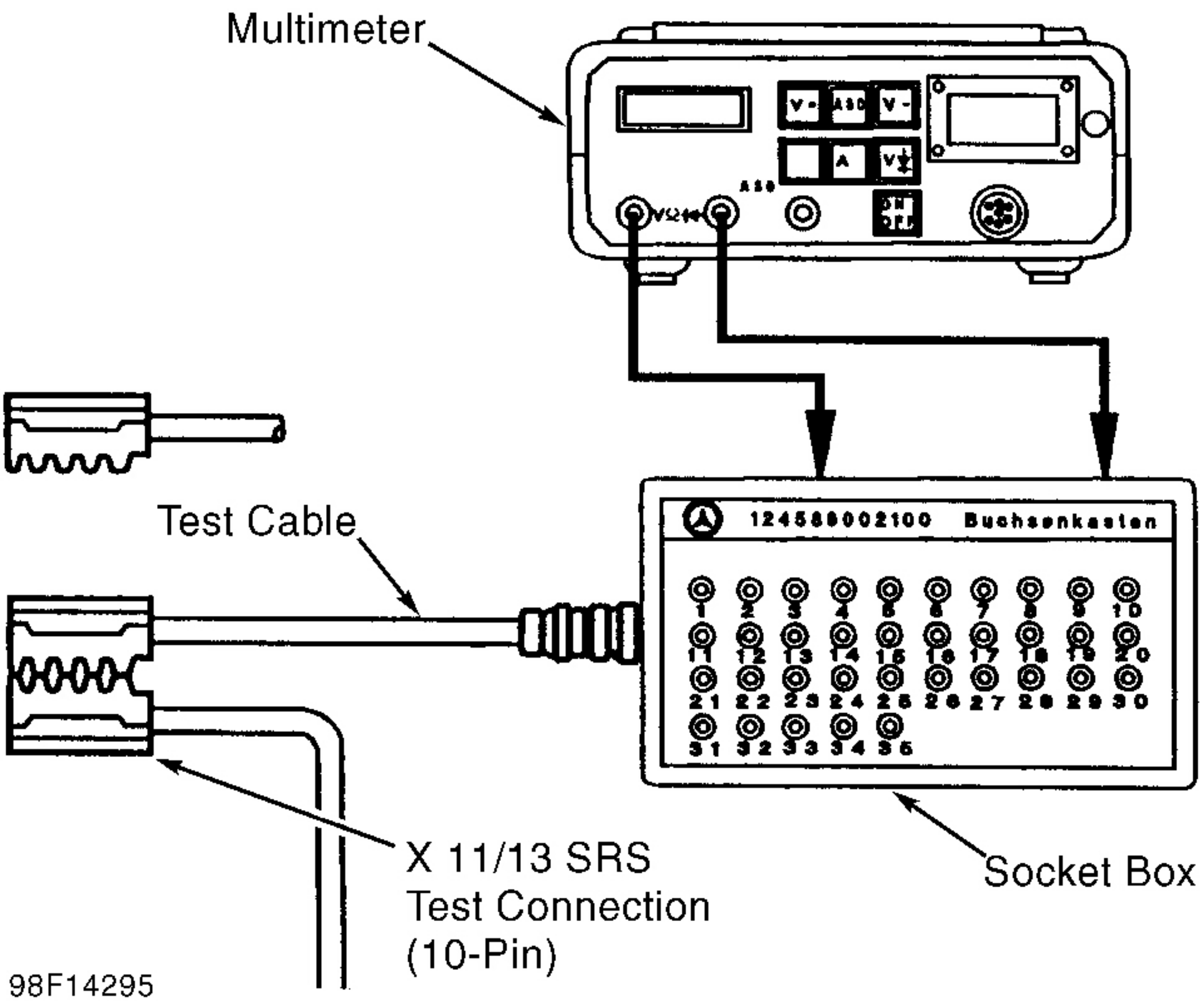



**Fig. 24: Connecting Socket Box (2 Of 2)**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

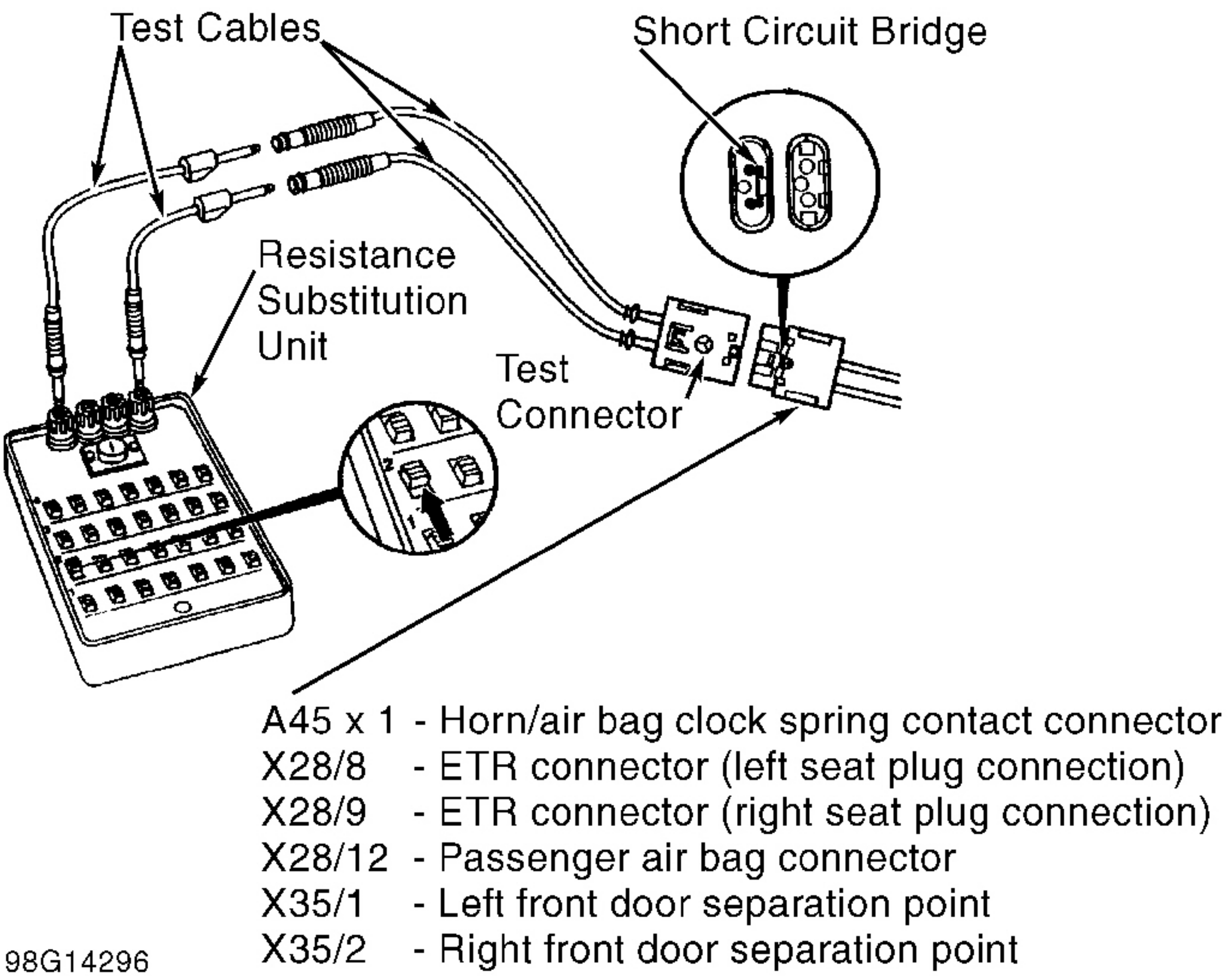



**Fig. 25: Connecting Resistance Substitution Unit**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

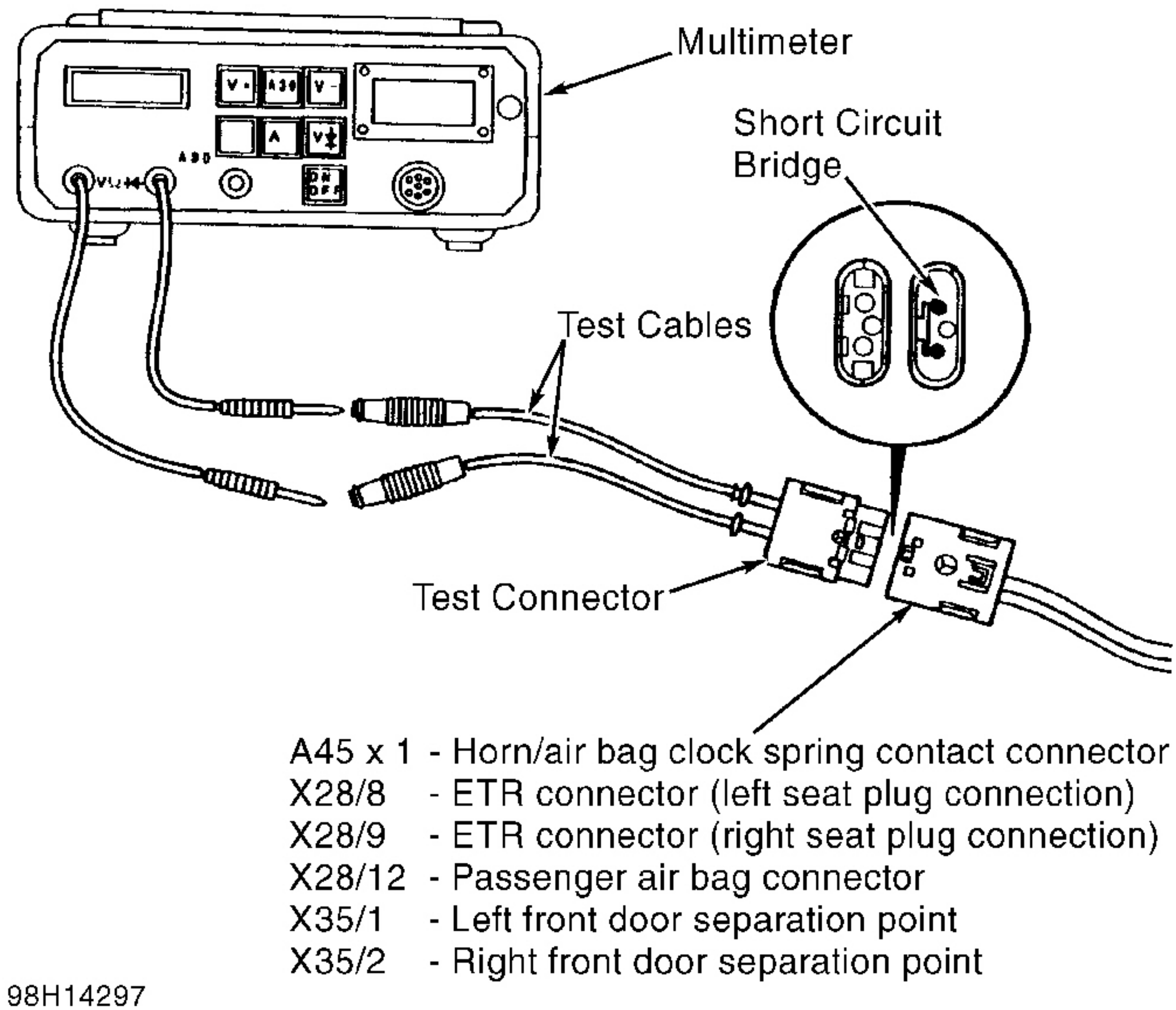



**Fig. 26: Testing Air Bag Squib Circuit With Multimeter**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

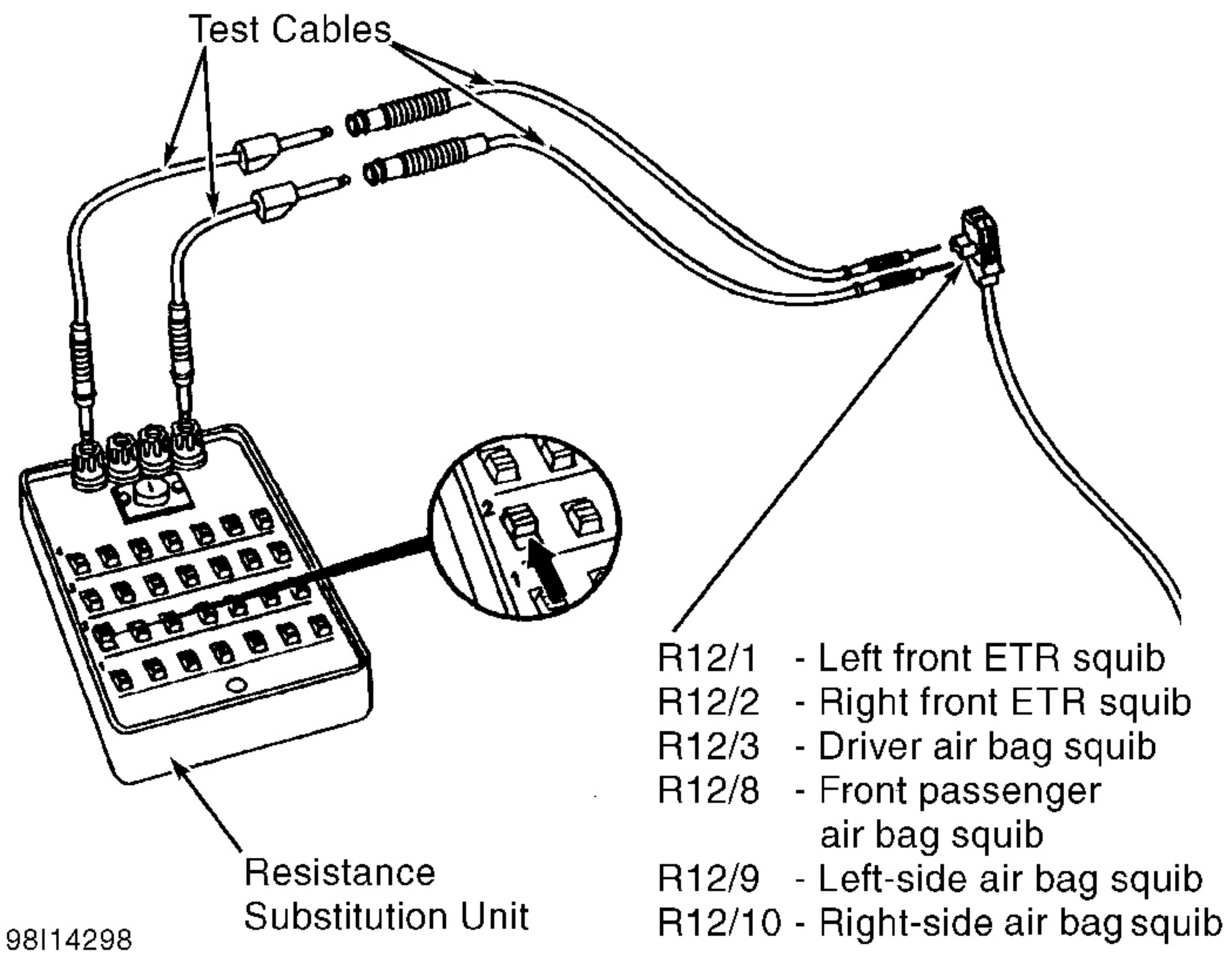



**Fig. 27: Testing Air Bag Squib Circuit With Resistance Substitution Unit**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

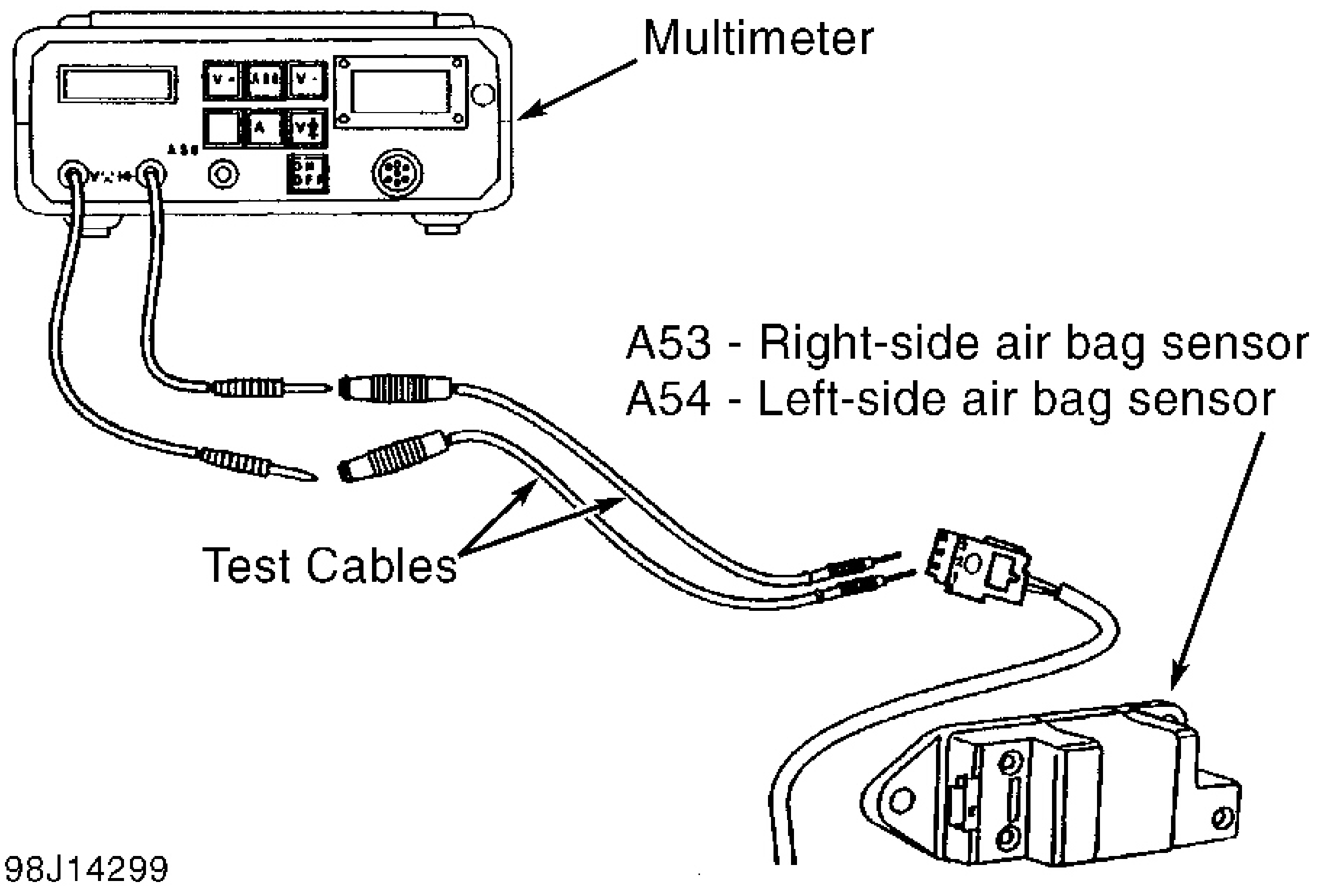



**Fig. 28: Testing Side Air Bag Sensor**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

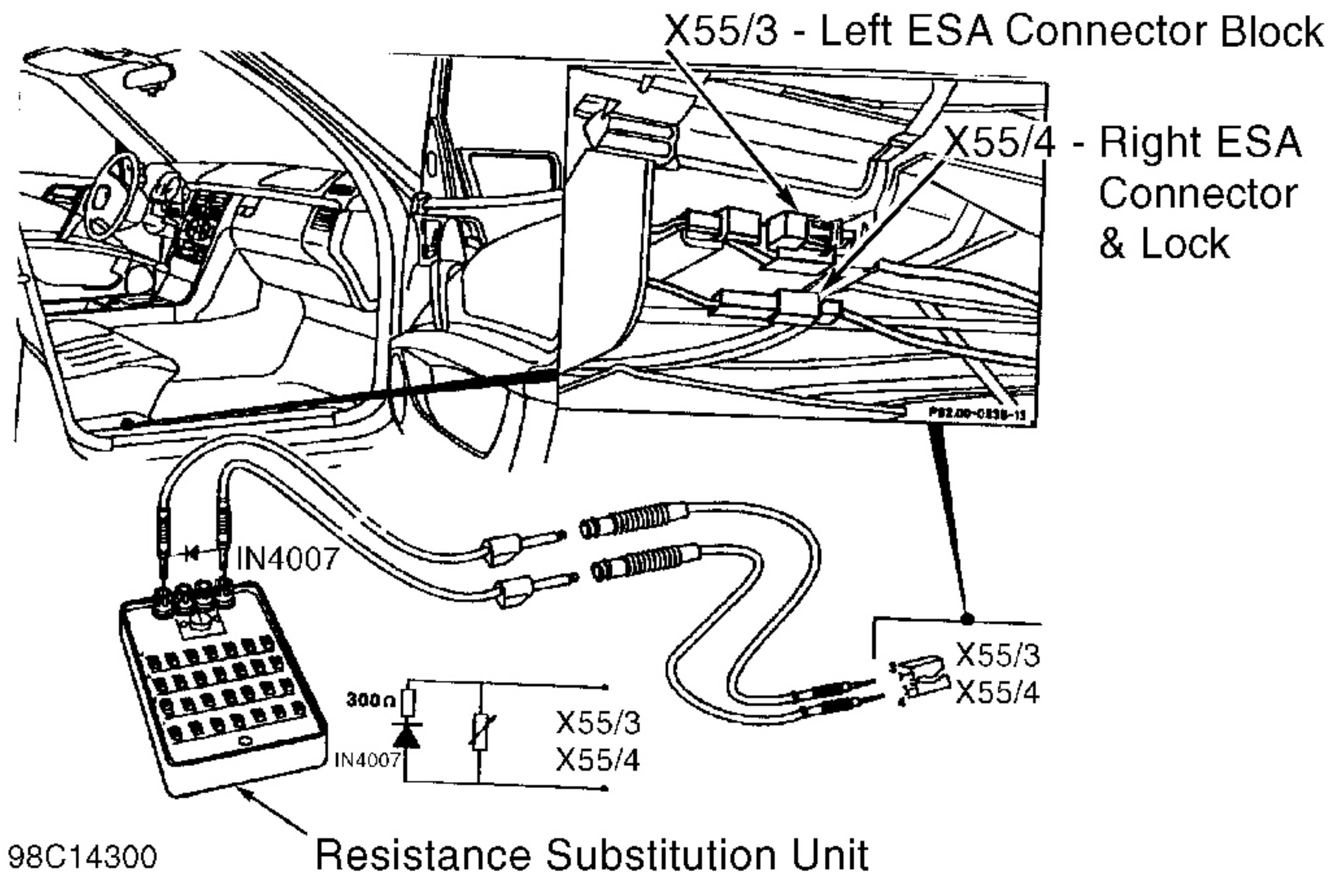



**Fig. 29: Testing Seat Occupation Recognition Sensor**
**Courtesy of MERCEDES-BENZ OF NORTH AMERICA**

## WIRING DIAGRAMS

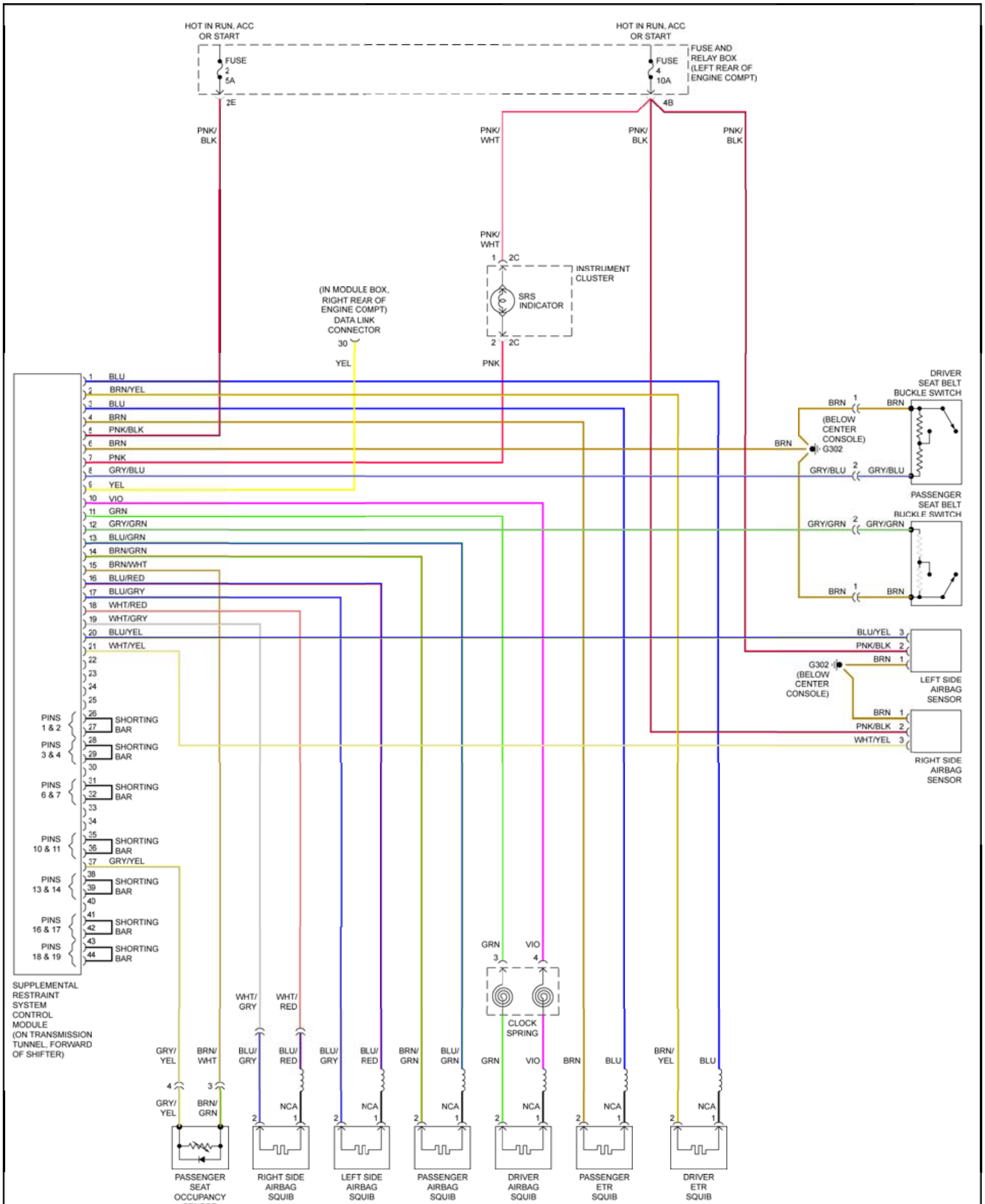
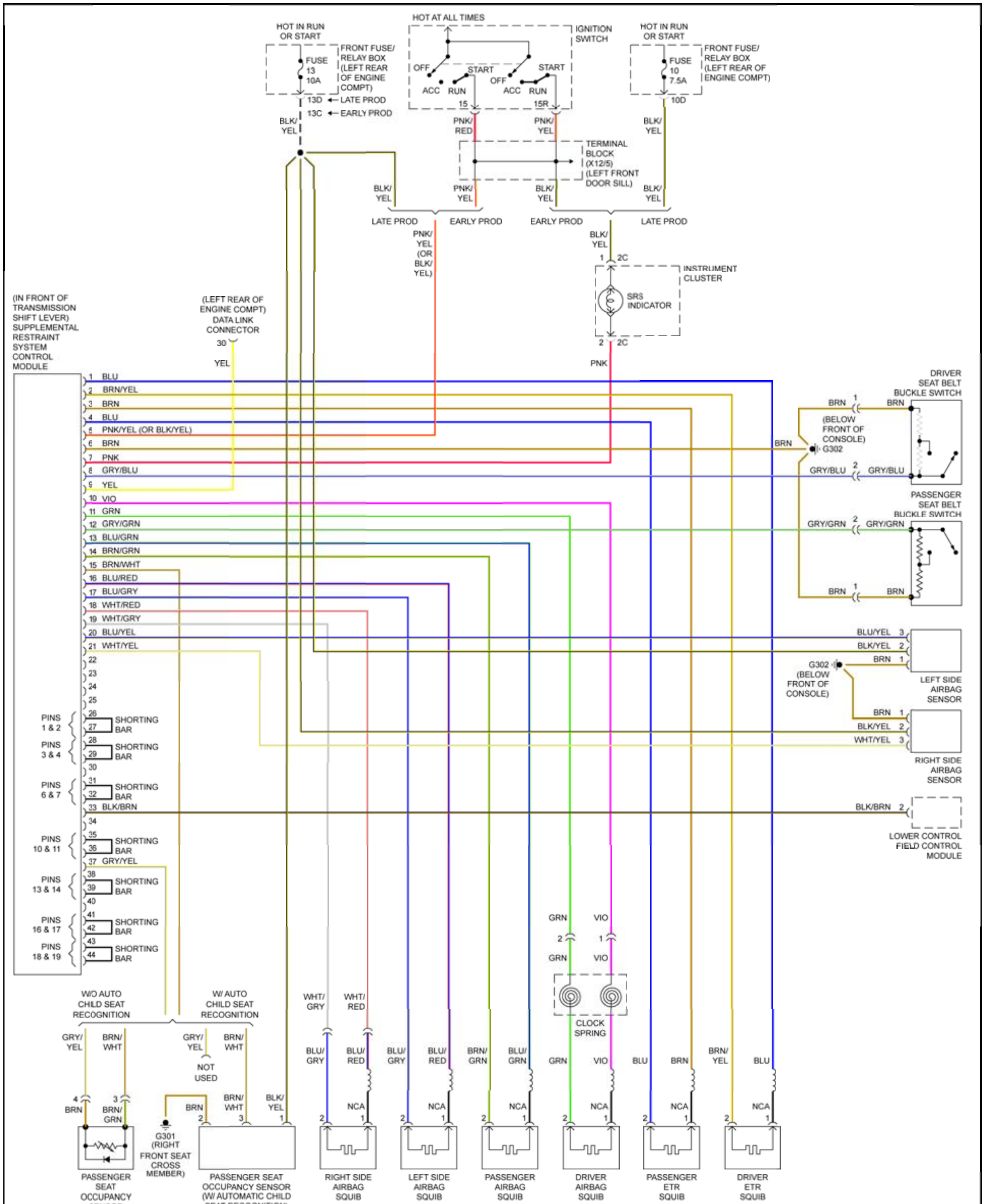

HOT IN RUN, ACC OR START
FUSE 2 5A
HOT IN RUN, ACC OR START
FUSE 4 10A
FUSE AND RELAY BOX (LEFT REAR OF ENGINE COMPT)
INSTRUMENT CLUSTER
SRS INDICATOR
(IN MODULE BOX, RIGHT REAR OF ENGINE COMPT) DATA LINK CONNECTOR
DRIVER SEAT BELT BUCKLE SWITCH
(BELOW CENTER CONSOLE) G302
PASSENGER SEAT BELT BUCKLE SWITCH
LEFT SIDE AIRBAG SENSOR
RIGHT SIDE AIRBAG SENSOR
SHORTING BAR
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE (ON TRANSMISSION TUNNEL, FORWARD OF SHIFTER)
CLOCK SPRING
PASSENGER SEAT OCCUPANCY SENSOR
RIGHT SIDE AIRBAG SQUIB
LEFT SIDE AIRBAG SQUIB
PASSENGER AIRBAG SQUIB
DRIVER AIRBAG SQUIB
PASSENGER ETR SQUIB
DRIVER ETR SQUIB
105591

**Fig. 30: Air Bag System Wiring Diagram (C230, C280 & CLK320)**



HOT IN RUN OR START
FRONT FUSE/ RELAY BOX (LEFT REAR OF ENGINE COMPT)
FUSE 13 10A
13D ← LATE PROD
13C ← EARLY PROD
HOT AT ALL TIMES
IGNITION SWITCH
OFF
START
ACC
RUN
15
15R
HOT IN RUN OR START
FRONT FUSE/ RELAY BOX (LEFT REAR OF ENGINE COMPT)
FUSE 10 7.5A
10D
BLK/ YEL
PNK/ RED
PNK/ YEL
TERMINAL BLOCK (X12/5) (LEFT FRONT DOOR SILL)
LATE PROD
EARLY PROD
PNK/ YEL (OR BLK/ YEL)
INSTRUMENT CLUSTER
SRS INDICATOR
2C
(IN FRONT OF TRANSMISSION SHIFT LEVER) SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE
(LEFT REAR OF ENGINE COMPT) DATA LINK CONNECTOR
30
YEL
PNK
1 BLU
2 BRN/YEL
3 BRN
4 BLU
5 PNK/YEL (OR BLK/YEL)
6 BRN
7 PNK
8 GRY/BLU
9 YEL
10 VIO
11 GRN
12 GRY/GRN
13 BLU/GRN
14 BRN/GRN
15 BRN/WHT
16 BLU/RED
17 BLU/GRY
18 WHT/RED
19 WHT/GRY
20 BLU/YEL
21 WHT/YEL
33 BLK/BRN
37 GRY/YEL
PINS 1 & 2
PINS 3 & 4
PINS 6 & 7
PINS 10 & 11
PINS 13 & 14
PINS 16 & 17
PINS 18 & 19
SHORTING BAR
DRIVER SEAT BELT BUCKLE SWITCH
(BELOW FRONT OF CONSOLE) G302
GRY/BLU
PASSENGER SEAT BELT BUCKLE SWITCH
GRY/GRN
BLU/YEL
BLK/YEL
G302 (BELOW FRONT OF CONSOLE)
LEFT SIDE AIRBAG SENSOR
WHT/YEL
RIGHT SIDE AIRBAG SENSOR
BLK/BRN
LOWER CONTROL FIELD CONTROL MODULE
GRN
VIO
CLOCK SPRING
W/O AUTO CHILD SEAT RECOGNITION
W/ AUTO CHILD SEAT RECOGNITION
GRY/ YEL
BRN/ WHT
NOT USED
WHT/ GRY
WHT/ RED
BLU/ GRY
BLU/ RED
BRN/ GRN
BLU/ GRN
BLU
BRN
BRN/ YEL
NCA
G301 (RIGHT FRONT SEAT CROSS MEMBER)
PASSENGER SEAT OCCUPANCY SENSOR
PASSENGER SEAT OCCUPANCY SENSOR (W/ AUTOMATIC CHILD SEAT RECOGNITION)
RIGHT SIDE AIRBAG SQUIB
LEFT SIDE AIRBAG SQUIB
PASSENGER AIRBAG SQUIB
DRIVER AIRBAG SQUIB
PASSENGER ETR SQUIB
DRIVER ETR SQUIB
105475

**Fig. 31: Air Bag System Wiring Diagram (E300, E320, E420 & E430)**

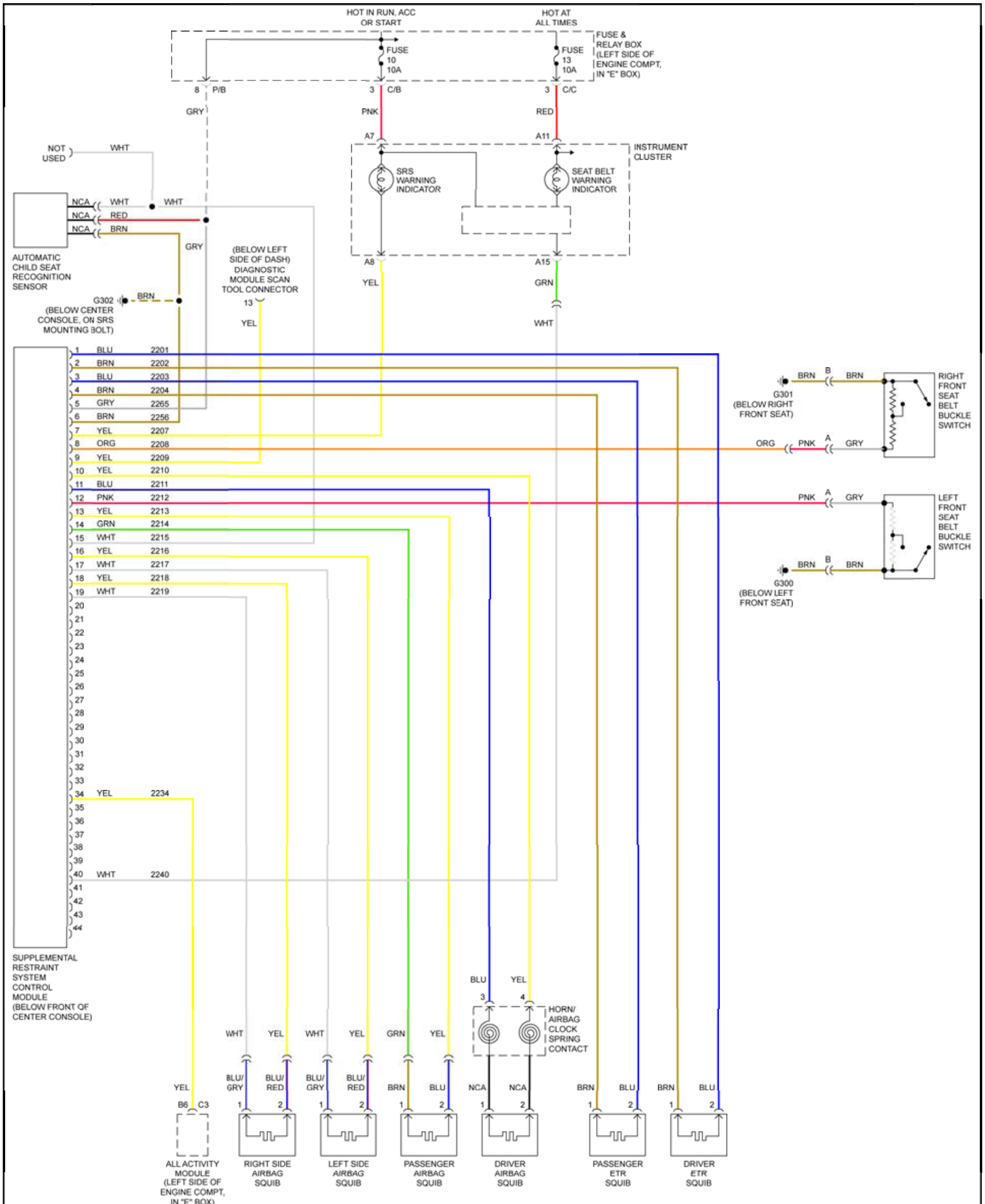

HOT IN RUN, ACC OR START
HOT AT ALL TIMES
FUSE 10 10A
FUSE 13 10A
FUSE & RELAY BOX (LEFT SIDE OF ENGINE COMPT, IN "E" BOX)
INSTRUMENT CLUSTER
SRS WARNING INDICATOR
SEAT BELT WARNING INDICATOR
NOT USED
AUTOMATIC CHILD SEAT RECOGNITION SENSOR
G302 (BELOW CENTER CONSOLE, ON SRS MOUNTING BOLT)
(BELOW LEFT SIDE OF DASH) DIAGNOSTIC MODULE SCAN TOOL CONNECTOR
G301 (BELOW RIGHT FRONT SEAT)
RIGHT FRONT SEAT BELT BUCKLE SWITCH
LEFT FRONT SEAT BELT BUCKLE SWITCH
G300 (BELOW LEFT FRONT SEAT)
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE (BELOW FRONT OF CENTER CONSOLE)
HORN/ AIRBAG CLOCK SPRING CONTACT
ALL ACTIVITY MODULE (LEFT SIDE OF ENGINE COMPT, IN "E" BOX)
RIGHT SIDE AIRBAG SQUIB
LEFT SIDE AIRBAG SQUIB
PASSENGER AIRBAG SQUIB
DRIVER AIRBAG SQUIB
PASSENGER ETR SQUIB
DRIVER ETR SQUIB
105582

**Fig. 32: Air Bag System Wiring Diagram (ML320)**

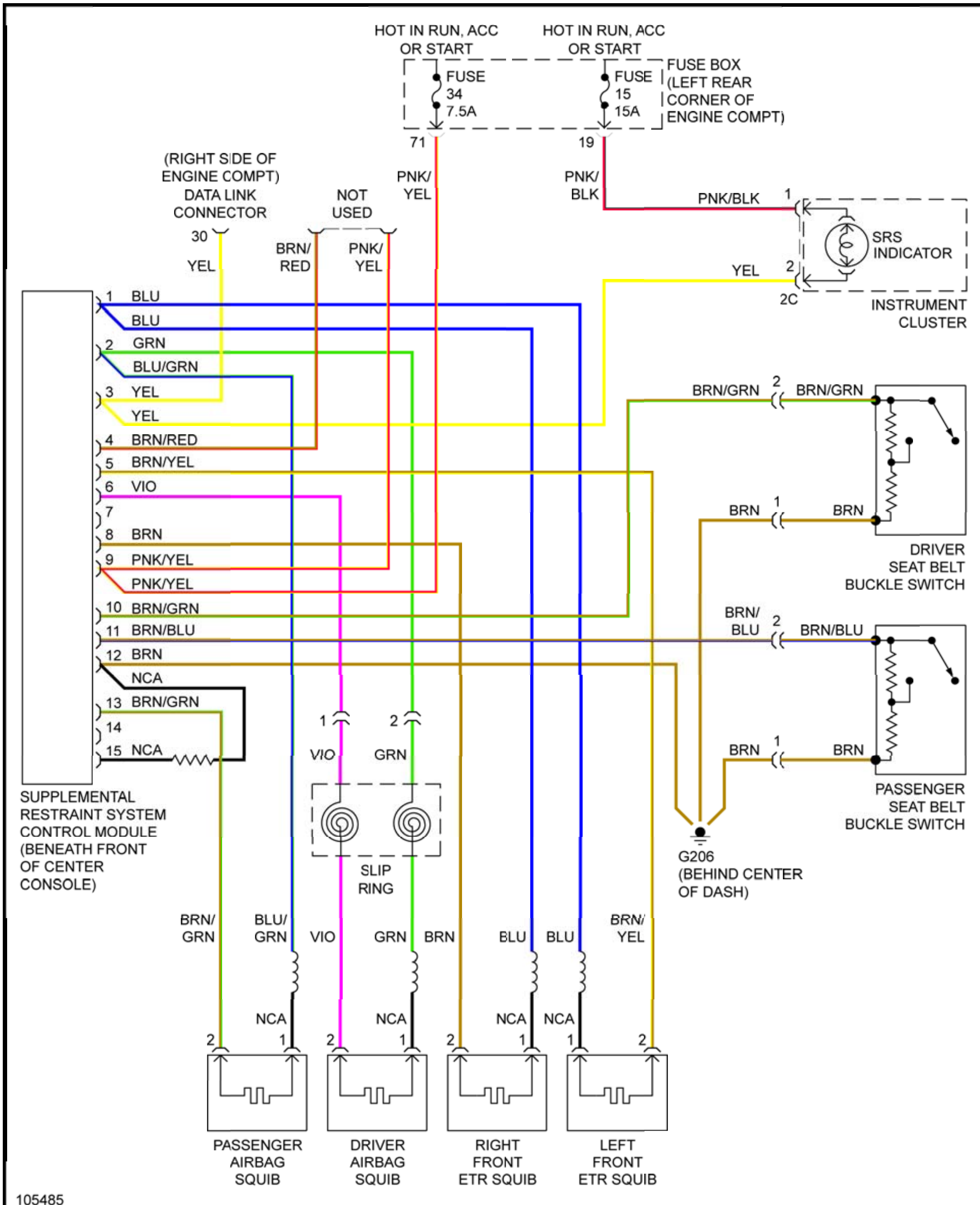

HOT IN RUN, ACC OR START
HOT IN RUN, ACC OR START
FUSE 34 7.5A
FUSE 15 15A
FUSE BOX (LEFT REAR CORNER OF ENGINE COMPT)
71
19
PNK/ YEL
PNK/ BLK
PNK/BLK
(RIGHT SIDE OF ENGINE COMPT) DATA LINK CONNECTOR
30
YEL
NOT USED
BRN/ RED
PNK/ YEL
SRS INDICATOR
YEL
2C
INSTRUMENT CLUSTER
1 BLU
BLU
2 GRN
BLU/GRN
3 YEL
YEL
4 BRN/RED
5 BRN/YEL
6 VIO
7
8 BRN
9 PNK/YEL
PNK/YEL
10 BRN/GRN
11 BRN/BLU
12 BRN
NCA
13 BRN/GRN
14
15 NCA
BRN/GRN
BRN/GRN
BRN
BRN
DRIVER SEAT BELT BUCKLE SWITCH
BRN/ BLU
BRN/BLU
BRN
BRN
PASSENGER SEAT BELT BUCKLE SWITCH
G206 (BEHIND CENTER OF DASH)
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE (BENEATH FRONT OF CENTER CONSOLE)
VIO
GRN
SLIP RING
BRN/ GRN
BLU/ GRN
VIO
GRN
BRN
BLU
BLU
BRN/ YEL
NCA
NCA
NCA
NCA
PASSENGER AIRBAG SQUIB
DRIVER AIRBAG SQUIB
RIGHT FRONT ETR SQUIB
LEFT FRONT ETR SQUIB
105485

**Fig. 33: Air Bag System Wiring Diagram (S320, S420 & S500)**

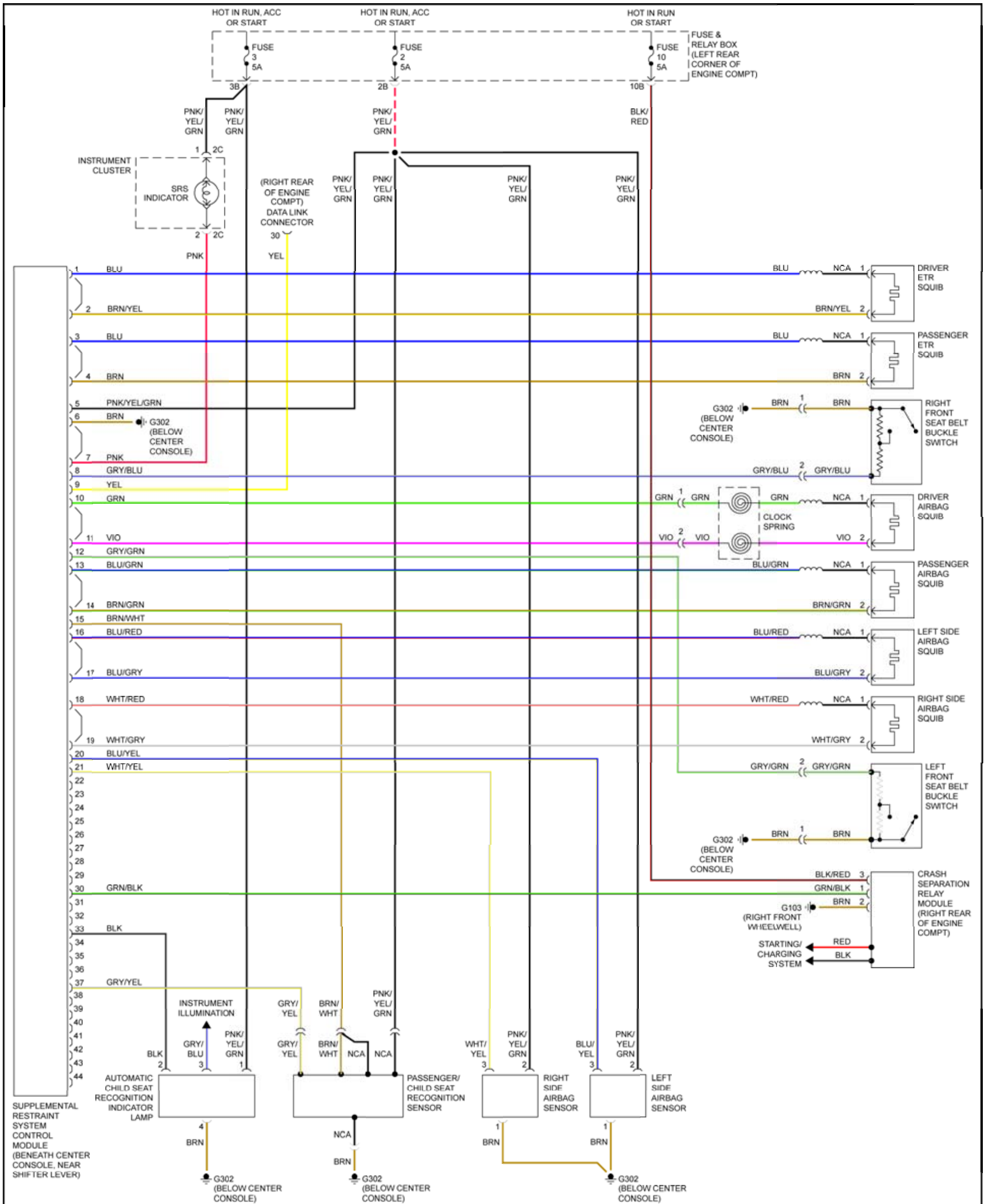

HOT IN RUN, ACC OR START
HOT IN RUN, ACC OR START
HOT IN RUN OR START
FUSE 3 5A
FUSE 2 5A
FUSE 10 5A
FUSE & RELAY BOX (LEFT REAR CORNER OF ENGINE COMPT)
INSTRUMENT CLUSTER
SRS INDICATOR
(RIGHT REAR OF ENGINE COMPT) DATA LINK CONNECTOR
DRIVER ETR SQUIB
PASSENGER ETR SQUIB
RIGHT FRONT SEAT BELT BUCKLE SWITCH
G302 (BELOW CENTER CONSOLE)
DRIVER AIRBAG SQUIB
CLOCK SPRING
PASSENGER AIRBAG SQUIB
LEFT SIDE AIRBAG SQUIB
RIGHT SIDE AIRBAG SQUIB
LEFT FRONT SEAT BELT BUCKLE SWITCH
CRASH SEPARATION RELAY MODULE (RIGHT REAR OF ENGINE COMPT)
G103 (RIGHT FRONT WHEELWELL)
STARTING/ CHARGING SYSTEM
INSTRUMENT ILLUMINATION
AUTOMATIC CHILD SEAT RECOGNITION INDICATOR LAMP
PASSENGER/ CHILD SEAT RECOGNITION SENSOR
RIGHT SIDE AIRBAG SENSOR
LEFT SIDE AIRBAG SENSOR
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE (BENEATH CENTER CONSOLE, NEAR SHIFTER LEVER)
G302 (BELOW CENTER CONSOLE)
1 BLU
2 BRN/YEL
3 BLU
4 BRN
5 PNK/YEL/GRN
6 BRN
7 PNK
8 GRY/BLU
9 YEL
10 GRN
11 VIO
12 GRY/GRN
13 BLU/GRN
14 BRN/GRN
15 BRN/WHT
16 BLU/RED
17 BLU/GRY
18 WHT/RED
19 WHT/GRY
20 BLU/YEL
21 WHT/YEL
30 GRN/BLK
33 BLK
37 GRY/YEL
BLK/RED
RED
BLK
NCA
105571

**Fig. 34: Air Bag System Wiring Diagram (SLK230)**